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Bulletin of the
Wake Forest University
Graduate School

Including

Bowman Gray School
of Medicine



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Bulletin of the Wake Forest University Graduate School

Including
The Bowman Gray School of Medicine

Announcements for
1982-1983

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Watlington Hall — Hawthorne Campus

The Calendar

Summer Session 1982 Reynolda Campus

First Term

May	26	Wednesday	Registration, 8:30–11:30 a.m., 210 Reynolda Hall
June	28–29	Monday – Tuesday	Classes begin in the afternoon Examinations

Second Term

July	1	Thursday	Registration, 8:30–11:30 a.m., 210 Reynolda Hall
July	6	Tuesday	Classes begin in the afternoon
July	23	Friday	File statement of intent to graduate August 6
August	5–6	Thursday – Friday	Last day to submit thesis to graduate August 6 Examinations

Fall Semester 1982 Reynolda Campus and Hawthorne Campus*

August	30–31	Monday– Tuesday	Registration and orientation†
September	1	Wednesday	Classes begin
September	14	Tuesday	Last day to add courses
September	28	Tuesday	Last day to drop courses
September	29	Wednesday	File statement of intent to graduate December 18
October	8	Friday	Fall holiday
November	29	Monday	Last day to submit thesis to graduate December 18
November	25–28	Thursday– Sunday	Thanksgiving recess
December	11–18	Saturday– Saturday	Final examinations
December	19–	Sunday–	Christmas recess**
January	12	Wednesday	

Spring Semester 1983 Reynolda Campus and Hawthorne Campus

January	13–14	Thursday– Friday	Registration
January	17	Monday	Classes begin
January	28	Friday	Last day to add courses
February	3	Thursday	Founders' Day Convocation
February	11	Friday	Last day to drop courses
March	7	Monday	File statement of intent to graduate May 16
March	12–20	Saturday– Sunday	Spring recess
April	27	Wednesday	Last day to submit thesis to graduate May 16
May	2–10	Saturday– Monday	Final examinations††
May	15	Sunday	Baccalaureate Sermon
May	16	Monday	Commencement

*The Bowman Gray School of Medicine of Wake Forest University

†Orientation for new Bowman Gray students will begin August 12 and classes in medical curriculum, August 16. September 6 and April 4 will be holidays at Bowman Gray.

*Bowman Gray students taking courses in the medical curriculum will begin the spring semester January 3.

†Examinations for Bowman Gray students taking courses in the medical curriculum will end May 21.

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President James R. Scales

The University

Wake Forest University is characterized by its devotion to liberal arts learning and professional preparation for men and women, its strong sense of community and fellowship, and its encouragement of free inquiry and expression.

Founded in 1834 by the Baptist State Convention of North Carolina, the school opened its doors to students on February 3 as Wake Forest Institute, with Samuel Wait as principal. It was located in the Forest of Wake County, North Carolina, on the plantation of Dr. Calvin Jones, near which the Village of Wake Forest later developed.

Rechartered in 1838 as Wake Forest College, it is one of the oldest institutions of higher learning in the state. It was exclusively a college of liberal arts for men until 1894, when the School of Law was established. The School of Medicine, founded in 1902, offered a two-year medical program until 1941. In that year the School was moved from the Town of Wake Forest to Winston-Salem, became associated with the North Carolina Baptist Hospital, and was renamed the Bowman Gray School of Medicine in honor of the benefactor who made possible the move and expansion to a full four-year program. In 1942 Wake Forest admitted women as regular undergraduate students.

A School of Business Administration was established in 1948 and for over two decades offered an undergraduate program of study in business. In 1969 the Babcock Graduate School of Management was formed and the professional program for undergraduates was phased out. On September 12, 1980, the undergraduate program in business and accountancy was reconstituted as the undergraduate School of Business and Accountancy. The Division of Graduate Studies was established in 1961. It is now organized as the Graduate School and encompasses advanced work in the arts and sciences on both the Reynolda and Hawthorne Campuses in Winston-Salem. The summer session was inaugurated in 1921.

In 1946 the Trustees of Wake Forest College and the Baptist State Convention of North Carolina accepted a proposal by the Z. Smith Reynolds Foundation to relocate the non-medical divisions of the College in Winston-Salem, where the School of Medicine was already established. The late Charles H. Babcock and his wife, the late Mary Reynolds Babcock, contributed a campus site, and building funds were received from many sources. Between 1952 and 1956 the first fourteen buildings were erected in Georgian style on the new Winston-Salem campus. In 1956 the College moved all operations, leaving the 122-year-old campus in the Town of Wake Forest to the Southeastern Baptist Theological Seminary.

The decade that followed was the College's most expansive, and in 1967 its augmented character was recognized by the change in name to Wake Forest University. Today enrollment in all schools of the University stands at over 4,700. Governance remains in the hands of the Board of Trustees, and development for each of the five schools of the University is augmented by Boards of Visitors for the undergraduate College and Graduate School, the School of Law, the Graduate School of Management, and the School of Medicine. A joint board of University Trustees and Trustees of the North Carolina Baptist Hospital is responsible for the

Medical Center, which includes the hospital and the School of Medicine. Alumni and parents' organizations are also active at Wake Forest, and support by the Z. Smith Reynolds Foundation and other foundations and corporations is strong and continuing.

Wake Forest's relationship with the Baptist State Convention is an important part of the school's heritage. Wake Forest's founders proposed to establish an institution that would provide education under Christian influences. The basis for the continuing relationship between the University and the Convention is a mutually agreed-upon covenant which grows out of a commitment to God and to each other. The covenant expresses the Convention's deep interest in Christian higher education and the University's desire to serve the denomination as one of its constituencies. Wake Forest receives significant financial and intangible support from Convention-affiliated churches.

The College, undergraduate School of Business and Accountancy, Graduate School, School of Law, and Graduate School of Management are located on the Reynolda Campus in northwest Winston-Salem. The Bowman Gray School of Medicine is about four miles away, near the city's downtown on what is known as the Hawthorne Campus. The University also offers instruction regularly at Casa Artom in Venice, at Worrell House in London, and in other places around the world.

The undergraduate faculties offer courses of study leading to the baccalaureate in thirty departments and interdisciplinary areas. The School of Law offers the Juris Doctor and the Graduate School of Management the Master of Business Administration degree. In addition to the Doctor of Medicine degree, the School of Medicine offers through the Graduate School programs leading to the Master of Science and Doctor of Philosophy degrees in the basic medical sciences. The Graduate School confers the Master of Arts, Master of Arts in Education, and Master of Science degrees in the arts and sciences and the Doctor of Philosophy degree in biology and chemistry.

Libraries

The libraries of Wake Forest University support research in undergraduate education and in each of the disciplines in which a graduate degree is offered. An endowment provided by a substantial gift from the Mary Reynolds Babcock Foundation and another from Nancy Reynolds has been assigned to the sustained expansion and development of library resources, especially to support the graduate program. The libraries of the University hold membership in the Association of Southeastern Research Libraries.

The library collections total 818,711 volumes. Of these, 624,367 constitute the general collection in the Z. Smith Reynolds Library, 83,112 are housed in the School of Law, 98,761 in the library of the Bowman Gray School of Medicine, and 12,471 in a relatively new library in the Babcock Graduate School of Management. Subscriptions to 9,989 periodicals and serials, largely of scholarly content, are maintained by the four libraries of the University. The holdings of the Z. Smith Reynolds Library also include 24,057 reels of microfilm, 265,303 pieces of microcards, microprint, and microfiche, and 77,045 volumes of United States government publications.

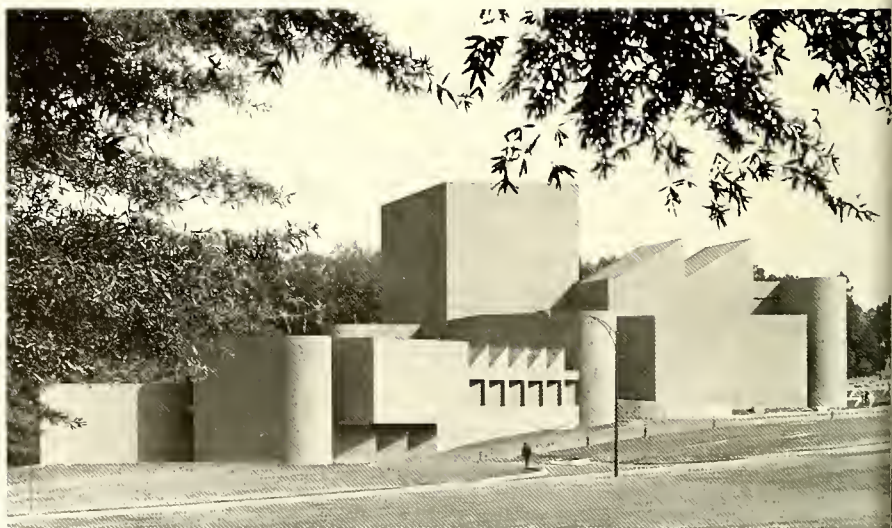
Special collections cover the works of selected late nineteenth and early twentieth century English and American writers, with pertinent critical material, a Mark Twain Collection, a Gertrude Stein Collection, and the Ethel Taylor Crittenden Collection in Baptist History. The recent acquisition of the Charles H. Babcock Collection of Rare and Fine Books represents an important addition to the resources of the Z. Smith Reynolds Library.

The library instructional program includes an orientation workshop in research methods, assistance in independent and directed studies, and bibliographic presentations as requested by faculty.

Recognition and Accreditation

Wake Forest University is a member of the Southern Association of Colleges and Schools, the Southern Universities Conference, the Association of American Colleges, the Conference of Southern Graduate Schools, and the Council of Graduate Schools in the United States. The University has chapters of the principal national social fraternities, professional fraternities, and honor societies, including Phi Beta Kappa and Sigma Xi. The Bowman Gray School of Medicine is a member of the Association of American Medical Colleges and is on the approved list of the Council on Medical Education of the American Medical Association. The program in counseling leading to the Master of Arts in Education degree is accredited by the National Council for the Accreditation of Teacher Education.

Wake Forest College was accredited by the Southern Association of Colleges and Schools in 1921. The reaccreditation of 1965 included the master's and doctoral degree programs in the Division of Graduate Studies. Accreditation was reaffirmed in December 1975.



The Scales Fine Arts Center on the Reynolda Campus



Reynolda Hall

The Graduate School

In accord with the prevailing custom among American colleges during the antebellum period, Wake Forest granted honorary master's degrees to selected alumni. By 1862, when the College closed temporarily because of the Civil War, twenty-nine such degrees had been awarded. The first announcement of a program of study leading to an earned graduate degree at Wake Forest was made in 1866. Between 1871, when the first degrees earned under the plan were awarded to John Bruce Brewer (grandson of Samuel Wait) and Franklin Hobgood, and 1951, 383 Master of Arts and Master of Science degrees were granted. In 1949 the School of Arts and Sciences discontinued admitting applicants for the Master of Arts degree because the rapid increase in the size of the undergraduate student body following World War II had overloaded the faculty. The School of Medicine did not interrupt its graduate program. The first Master of Science degree conferred by the School after it moved to Winston-Salem was awarded in 1943, and the degree was regularly offered thereafter by the departments of anatomy, biochemistry, microbiology, pharmacology, and physiology.

During the fifteen years the College and the School of Medicine were located in different towns, the study of graduate education continued on both campuses. The self-study report adopted by the faculty of the School of Arts and Sciences immediately prior to its removal to Winston-Salem recommended that graduate study leading to the master's degree be resumed as soon as practicable. In 1958 the administration of the School of Medicine, in view of an increasing demand for graduate instruction in basic medical and clinical sciences, appointed a Committee on Graduate Studies for the purpose of reorganizing the graduate program.

As a result of these two parallel studies and in recognition of the need for an institution-wide approach to graduate education, the Trustees on January 13, 1961 established the Division of Graduate Studies and authorized it to grant the Master of Arts degree in the School of Arts and Sciences and the Master of Science and Doctor of Philosophy degrees in the School of Medicine. The first Ph.D. degree was awarded in 1964. In 1967 the Master of Arts in Education degree was added to the graduate program in arts and sciences. The first Ph.D. program on the Reynolda Campus was begun in 1970.

Statement of Purpose

In December 1979 the Trustees adopted the following statement of the purpose and objectives of the University:

Wake Forest is a university entrusted with a vital religious heritage and an equally vital tradition of academic freedom. Recognizing the special character of its obligation as an educational institution, Wake Forest assumes the responsibility of insuring that the Christian faith will be an integral part of the University's common life. The University maintains its historic religious perspective through an association with the Baptist

churches of North Carolina, the visible symbol and ministry of the campus church, the chaplaincy, and the Christian commitment of individuals within the faculty and administration. At Wake Forest, those who represent this perspective engage in a continuing dialogue with those of other views who join with them in dedication to teaching and learning. Together they assume responsibility for the integrity of the institution and for its commitment to academic excellence.

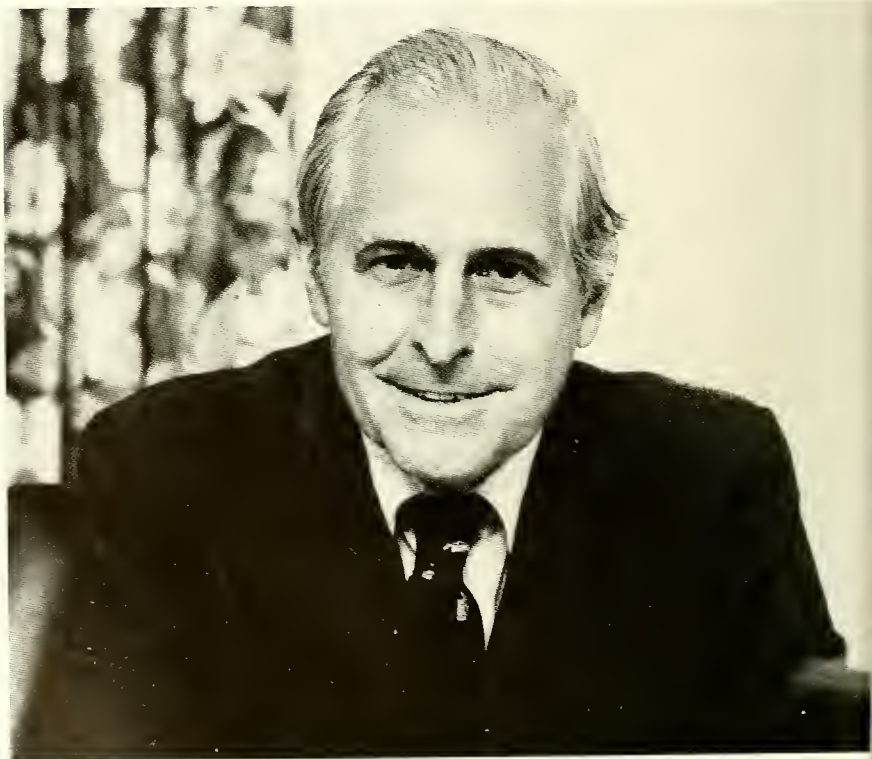
In keeping with its belief in the value of community, Wake Forest also recognizes an obligation to preserve its atmosphere of mutual respect and of openness to diverse interests and concerns. Its religious heritage, which continues to find expression in tradition, ritual, and convocation, provides unifying and sustaining values beneficial to the whole community. Because of its heritage, Wake Forest fosters honesty and good will, and it encourages the various academic disciplines to relate their particular subjects to the fundamental questions which pertain to all human endeavor.

Along with the value of community, Wake Forest respects the value of the individual, which it expresses through its concern for the education of the whole person. In view of this concern, a basic curriculum composed of the liberal arts and sciences is essential to the objectives of the College. This means that though the usefulness of professional and technical courses is acknowledged, it is necessary that such courses be related to a comprehensive program of humanistic and scientific studies. In particular, this objective requires an acceptable level of proficiency in those linguistic and mathematical skills which are basic to other pursuits. It also calls for a study of the major contributions from one or more representative areas within the natural sciences, the social sciences, and the humanities, including an examination of integrating disciplines such as religion, philosophy, and history. Such a course of study, when made an essential part of the total offering, prevents the premature specialization which threatens effective communication among the disciplines, and it addresses the fundamental as well as the vocational needs of the student. Wake Forest expects that all of the courses in its curriculum will make significant demands upon the talents of the student and will encourage the development of a humane disposition and inquiring spirit.

The Graduate School, operating within the framework of these principles, seeks to provide a community of faculty and advanced students dedicated to teaching, research, and productive scholarship. Through graduate programs in the arts and sciences and the basic medical sciences, an effort is made to expand the frontiers of knowledge and to keep abreast of man's understanding of the rapidly changing human environment. As a significant feature of the educational process, students are encouraged to develop the initiative, resourcefulness, and responsibility required of those who become independent intellectual leaders in their chosen fields of endeavor.

Administration

The Graduate School is administered by a Graduate Council composed of three ex officio administrative officials and nine faculty members elected by the Graduate School faculty. Six of the nine are members of the College faculty (Reynolda Campus) and three are members of the Bowman Gray School of Medicine faculty (Hawthorne Campus). The members of the Graduate Council comprise the Committee for Graduate Studies in the Arts and Sciences and the Committee for Biomedical Graduate Studies, which are responsible on the respective campuses for such matters as the admission of students.



Dean of the Graduate School Henry Smith Stroupe

Procedures

All students are responsible for familiarizing themselves with the portions of this bulletin which pertain to their course of study. Statements concerning courses and expenses should not be regarded as irrevocable contracts between the student and the institution. The University reserves the right to change the schedule of classes and the cost of instruction at any time within the student's term of residence.

ADMISSION

Eligibility. Undergraduates in their senior year and graduates of accredited colleges or universities may apply for admission to the Graduate School for study on the Reynolda Campus or in the Bowman Gray School of Medicine on the Hawthorne Campus. Medical students who have satisfactorily completed or will complete by the end of the spring semester at least one year of the medical curriculum may apply for admission to the Graduate School. The Graduate School also accepts applications from holders of the M.D., D.D.S., or D.V.M. degrees, or from candidates for these degrees who will have satisfactorily completed the prescribed medical curriculum prior to matriculation in the Graduate School.

Whatever their previous academic training may have been, all applicants must have superior records. This requirement is usually interpreted as at least a B average or standing in the upper quarter of the class or both.

Graduate Record Examinations. All applicants are required to submit scores on the Aptitude Test and the Advanced Test of the Graduate Record Examinations administered by the Educational Testing Service, Box 955, Princeton, New Jersey 08541.* Usually these examinations are taken between October and January of the student's senior year. The national administration of the GRE normally falls in the months of January, February, April, June, October, and December each year. Applicants should make arrangements for taking the tests by writing the Educational Testing Service several weeks in advance of the testing date selected.

Test of English as a Foreign Language. Applicants from non-English-speaking countries must submit satisfactory scores on the Test of English as a Foreign Language administered by the TOEFL Program of the Educational Testing Service. The TOEFL bulletin of information and registration form can be obtained at American embassies and consulates, offices of the United States Information Service, United States educational commissions and foundations abroad, and at binational centers. Students unable to obtain a bulletin from one of the above should write for it to Test of English as a Foreign Language, Box 899, Princeton, New Jersey 08541, U.S.A. Administrations of TOEFL are coordinated with the GRE and are available in most countries. Correspondence should be initiated at least three months before the testing date.

**The Advanced Test is a requirement in all of the departments for which a specific test is given. Applicants in other departments may wish to strengthen their applications by submitting scores on the Advanced Test in a related field. For example, the biology test would give an indication of ability to do graduate work in anatomy.*

Personal Interviews. Although not required of all students, personal interviews are encouraged and may be specified as a requirement for some applicants.

Dates for Applying. Students may enroll at the beginning of the fall or the spring semester or either summer term. Applications should be filed at least eight weeks prior to the date of anticipated enrollment. Applicants for financial assistance for the academic year beginning in September should submit applications for admission, applications for financial assistance, and all supporting documents before March 1. Grants will be awarded by April 1 and are to be accepted or declined by April 15.

Transfer Students. Applicants for the master's degree who have completed a portion of their graduate training in another institution are eligible for admission but may not transfer for credit more than six semester hours of course work. This limitation does not apply to applicants for the Ph.D. degree.

Action on Applications. Students are informed within a few weeks after receipt of the completed application whether or not admission has been granted. The institution reserves the right to refuse admission to any applicant without assignment of reasons. Admission to the Graduate School does not constitute admission to candidacy for a graduate degree.

Admission Deposit (Reynolda Campus). Within three weeks after a letter of acceptance has been mailed by the Dean of the Graduate School, the applicant must send an admission deposit of \$55 to the Treasurer of Wake Forest University. This deposit is refundable upon request until June 30 for the fall semester or November 1 for the spring semester.

Admission of Handicapped Students. The Graduate School will consider the application of any student on the basis of his or her academic and personal merit, regardless of physical handicap. Though the Reynolda and Hawthorne campuses are built on many levels, a system of ramps and elevators makes each building accessible to those in wheelchairs or with limited mobility. The University will gladly assist handicapped students in making arrangements to meet special needs. Students who seek further information should consult the Graduate School or the University's Office of Equal Opportunity.

APPLICATION Reynolda Campus

ADMISSION CATEGORIES

Regular Status in a Degree Program. A person with a superior undergraduate record (at least a B average or upper quarter of the class and with the appropriate courses), satisfactory GRE scores (including the appropriate Advanced Test if one is given), and good recommendations may apply for regular admission.

Provisional Status in a Degree Program. Those who may be awaiting GRE scores or at the time of application have grades slightly below those specified for regular admission may apply for provisional admission. A student deficient in required undergraduate courses in the intended field of graduate study may apply in this category. Provisional status is limited to not more than one semester of full-time study or its equivalent in part-time study.

Unclassified Graduate Student. Applicants seeking courses for graduate credit but

not wishing to work for a graduate degree may apply for admission as unclassified or non-degree students. The GRE and some of the letters usually expected from former professors may be waived as requirements for unclassified status.

HOW TO APPLY

Applicants for admission to graduate study on the Reynolda Campus should request the Dean of the Graduate School to send an application for admission form. This form should be filled in completely and returned, along with a non-refundable application fee of \$10. Checks should be payable to Wake Forest University. The address is Dean of the Graduate School, Wake Forest University, 7487 Reynolda Station, Winston-Salem, North Carolina 27109 (telephone 919-761-5301).

Applicants must have each college or university which they have attended send one copy of an official transcript of their record to the Dean of the Graduate School. If the bachelor's degree has not been conferred at the time the transcript is sent, one copy of an official supplementary transcript must be forwarded soon after graduation.

Applicants must request letters of evaluation from three persons, at least two of whom are professors who have taught them in their majors. Letters are to be mailed directly by the writers to the Dean of the Graduate School.

It is the responsibility of the applicant to request that the Educational Testing Service forward scores on the Aptitude Test and the Advanced Test of the GRE to the Dean of the Graduate School.

Hawthorne Campus

Applicants for admission to graduate study in the Bowman Gray School of Medicine on the Hawthorne Campus should request the Associate Dean for Biomedical Graduate Studies to send an application for admission form. This form should be filled in completely and returned, along with a non-refundable application fee of \$10. The address is Associate Dean for Biomedical Graduate Studies, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, North Carolina 27103 (telephone 919-748-4303).

Applicants must have each college or university which they have attended send official transcripts of their record to the Associate Dean for Biomedical Graduate Studies.

Applicants must request letters of evaluation from three persons by listing them on the application. Forms are sent by the School of Medicine directly to the instructors.

It is the responsibility of the applicant to request that the Educational Testing Service forward scores on the Aptitude Test and the Advanced Test of the GRE to the Associate Dean for Biomedical Graduate Studies.

GRADUATE STUDENTS APPLYING TO MEDICAL SCHOOL

A student enrolled in a program of study in the Graduate School is eligible to make application for admission to the School of Medicine. If selected, the student must satisfactorily complete all requirements for the graduate degree by June 1 preceding

the date of matriculation in the medical school class to which he or she has been admitted. A student who voluntarily withdraws from a program of study in the Graduate School may make application for admission to the medical school providing one year will have elapsed from the time of withdrawal. A regularly enrolled medical student may withdraw temporarily from medical school to pursue a course of study leading to a graduate degree.

CLASSIFICATION OF STUDENTS

Full-Time Status. A student who devotes full-time to a graduate program as outlined by his or her faculty committee and is in full-time geographic residence with a minimum of twelve semester hours of course work including thesis research is considered a full-time student.

Part-Time Status. A student registered for less than the above amount of course work is considered a part-time student.

TUITION AND FEES

Statements concerning expenses should not be regarded as forming an irrevocable contract between the student and the University. The costs of instruction and other services outlined herein are those in effect on the date of publication of this bulletin, and the University reserves the right to change without notice the cost of instruction and other services at any time.

During both the academic year and the summer session, graduate students enrolled on either campus on a full-time basis may take courses on the other campus without additional tuition.

Reynolda Campus

An admission deposit of \$55, which subsequently serves as a graduation fee, is required to complete the admission of all who wish to study toward a graduate degree.

The following charges apply on the Reynolda Campus during the academic year: students enrolled for twelve or more semester hours or the equivalent — \$2,350 per semester; students enrolled for fewer than twelve semester hours or the equivalent — \$155 per semester hour.

During the academic year, a one-half tuition concession is granted to full-time faculty and other eligible staff members in all schools and divisions of the University and to the spouses of full-time faculty members for part-time study in the Graduate School. Wake Forest University also grants a one-half tuition rate for educators employed full-time in North Carolina public schools or state-approved non-public schools. These concessions do not apply to study in the schools of law, medicine, and management.

Graduate students enrolled for full-time residence credit are entitled to full privileges regarding libraries, laboratories, athletic contests, student publications, the College Union, the University Theatre, the Artists Series, and the Health Service. Part-time students are entitled, after paying tuition, to the use of the libraries and

laboratories but not to the other privileges mentioned above. They may, however, secure admission to athletic events and concerts and the other privileges listed above by paying an activity fee of \$70 per semester.

The fee to audit a class is \$20 per credit hour, with \$60 the maximum charge per course. Tuition for the summer session is \$60 per credit hour.

A graduation and thesis binding fee of \$55 is charged those who receive degrees. This fee covers the binding of five copies of the thesis or dissertation. Additional copies may be bound for \$5 each. Doctoral candidates pay \$30 to have abstracts of their dissertations published in *Dissertation Abstracts International*.

Students not enrolled in classes but using University facilities or faculty time for such projects as the completion of a thesis are required to register and pay a graduate student fee of \$30 per semester or \$15 for each term of the summer session.

During the academic year, all students, full- and part-time, receive tuition refunds according to the following schedule. This policy applies to students dropping courses as well as to those withdrawing. Withdrawals must be official and students must turn in their identification cards before claiming refunds.

<i>Number of Weeks Attendance*</i>	<i>Percentage of Total Tuition to be Refunded**</i>
1	Total Tuition
2	75%
3	50%
4	25%

Hawthorne Campus

Tuition is \$4,700 per year for full-time study and is payable in installments of \$2,250, \$2,250, and \$200 at the beginning of each semester and the summer session.

A full-time student may register to audit courses without payment of additional tuition. Permission of the instructor is required. Part-time study is charged at the rate of \$155 per semester hour.

A graduation fee of \$25 is payable prior to graduation. A fee of \$30 is required for publication of abstracts of doctoral dissertations in *Dissertation Abstracts International*.

HOUSING SERVICES

Reynolda Campus

The Graduate School does not require that students live in University housing. Most students make their own arrangements for housing off-campus. The Housing Office serves as an information center for individuals who wish to advertise rooms, apartments, and houses for rent or sale. It also provides a place for students to list information if they are interested in finding a roommate to share expenses. Off-campus facilities are not screened. The University serves only as an information

*Counting from the first day of registration; fractions of a week to count as a full week.

**The \$55 admission fee is not refunded.

source and does not assume responsibility for placement, lease agreements, or landlord-tenant relations.

University-owned efficiency apartments that are available to graduate students are described below. Graduate students who live in University housing are expected to follow the regulations and conditions governing occupancy as stated in the lease or contract agreement.

Married Student Efficiency Units. Forty-six efficiency apartments are located on the northwest corner of the Reynolda Campus and are available to graduate and undergraduate married couples. Each apartment has three small rooms, one of which includes an efficiency kitchen. Assignments are based on the date applications are received and on the needs of the University.

Single Graduate Student Efficiency Units. Ten efficiency units identical to those described above are available to accommodate two single students each. The single graduate student apartments are furnished with standard residence hall items. There are no residence hall facilities for graduate students. Assignments are based on the date of application.

It is advisable to make housing arrangements as early as possible. Further information and applications are available from the Director of Housing, Wake Forest University, 7342 Reynolda Station, Winston-Salem, North Carolina 27109 (919-761-5663).

Hawthorne Campus

Students are expected to secure their own accommodations. They are eligible for the above-mentioned facilities on a space-available basis only.

FOOD SERVICES Reynolda Campus

A cafeteria, fast-food service, and table service dining room are located in Reynolda Hall on the Reynolda Campus. Meals may be purchased individually or under an optional board plan. The approximate yearly cost individually is \$800-\$1100. For additional information write ARA Food Service Company, 7393 Reynolda Station, Winston-Salem, North Carolina 27109.

HEALTH SERVICES Reynolda Campus

Graduate students are entitled to the services of the University Health Service. A personal health history questionnaire, physical examination, and minimal lab work are required prior to admission to the University. These forms are mailed to the student at the time of acceptance.

The Health Service maintains an outpatient clinic which provides normal primary care services. A laboratory facility and a limited number of pharmaceuticals are maintained in the clinic. X-ray facilities are not available on campus; specialist consultations are obtained through private practitioners in Winston-Salem. A six-bed hospital adjoins the clinic area and is staffed by the Health Service staff.

Students are encouraged to obtain the group hospitalization coverage available to all students. Minimal charges are made for certain supplies, laboratory work, medications, and hospitalization on campus; there is no charge for physician or physician assistant or nursing personnel services on campus. The Health Service works closely with the Center for Psychological Services. Medical information and records are regarded as confidential, as in any other doctor/patient relationship.

Hawthorne Campus

The Student Health Program is conducted by the Department of Family and Community Medicine and is designed to provide continuing and comprehensive care of the graduate student officially enrolled in the medical school and paying full tuition. Initial history and physical examination, urinalysis, and hemogram are required at the beginning of the first year of enrollment, with the option of annual physical examinations thereafter. Routine immunizations are given as indicated.

Members of the faculty of the Department of Family and Community Medicine serve as student health physicians. The student health clinic is open Monday through Friday, with hours by appointment, for the care of minor illness. Student health physicians are available for emergencies twenty-four hours a day through an answering service. Counseling is also available, and a maximum of five counseling sessions will be provided without charge.

In addition to professional services by physicians and consultants, the following expenses for ambulatory care are borne by the Student Health Service: diagnostic and therapeutic hematology, microbiology, clinical chemistry, X-ray and electrocardiogram, and medications in common use for a limited period. Not included are costs for dilations, preparations for desensitization, ambulance service, braces and other surgical appliances, dental care, spectacles, eye refractions, and other special diagnostic or therapeutic equipment.

Consultations and/or specialist care are provided when indicated. The costs of hospitalization (not professional care) are the responsibility of the student. Hospitalization insurance is mandatory; a group hospitalization policy is available to students.

Members of the student's family are not included in this service; students are expected to make individual arrangements for their dependents. Faculty members serving as Student Health physicians advise students when requested.

VEHICLE REGISTRATION

All students residing or operating a vehicle on the Reynolda Campus (including all student and Faculty Apartments, Reynolda Gardens, and the Graylyn Estate) must register vehicles they are operating day or night whether or not owned by the operator. Students enrolled in two or fewer courses, or less than twelve credits, including audit and thesis credit, may register vehicles for a reduced fee.

Hawthorne Campus students have no automobile registration requirements or special parking privileges at the Medical Center. Those who take two or fewer classes, or less than twelve credits which meet on the Reynolda Campus, including audit and thesis credit, may register their vehicles for a reduced fee.

All vehicle registrations must be completed within twenty-four hours from the time the vehicle is first brought to campus. Vehicles are registered at the University Public Safety Office on the Reynolda Campus. Proof of ownership must be presented when applying for vehicle registration.

EDUCATIONAL PLANNING AND PLACEMENT

A full range of counseling and placement services is offered by the Office for Educational Planning and Placement. Graduate students seeking full-time employment after finishing their degrees are encouraged to consult the office early in their final year of study.

The Office for Educational Planning and Placement also assists students and student spouses in locating part-time employment either on-campus or off. A maximum of fifteen hours of work per week is suggested for full-time graduate students. Students are encouraged to consult the office (Reynolda Hall 7, 761-5246) for further information about job opportunities.

FINANCIAL ASSISTANCE **Reynolda Campus**

For 1982-83, thirty-six scholarships at \$4,700 each have been established, thirty fellowships at \$6,800 each, and forty-one assistantships at \$9,350 each (\$9,550 for the second year). The scholarships and the fellowships are non-service educational grants. Holders of all grants pay full tuition of \$2,350 per semester. An assistantship consists of an educational grant of \$6,800 plus compensation for work, normally in a science laboratory, in the amount of \$2,550 (\$2,750 for the second year). Assistants work from twelve to fifteen hours per week and carry approximately three-fourths of a normal load of courses.

Assistantships are potentially renewable, but the total number of years a student working toward the master's degree may receive support may not exceed two. Application for financial assistance forms, application for admission forms, and all supporting data should be submitted by March 1. Grants are awarded by April 1 and are to be accepted or declined by April 15.

In addition to the above grants, twenty full-tuition scholarships and a small number of research grants have been established for the summer session. Applications for summer assistance should be submitted by April 15. All correspondence regarding Reynolda Campus grants and admissions should be addressed to the Dean of the Graduate School, Wake Forest University, 7487 Reynolda Station, Winston-Salem, North Carolina 27109.

Graduate students interested in the National Direct Student Loan program or the Guaranteed (Insured) Student Loan program should request information from the Office of Financial Aid, Wake Forest University, 7305 Reynolda Station, Winston-Salem, North Carolina 27109.

Unclassified (non-degree-seeking) students are not eligible for financial aid.

Hawthorne Campus

Financial support for students is provided from various sources, including teaching assistantships, fellowships and tuition scholarships. In addition, many students earn compensation by working as technicians in research. All assistantships and fellowships include tuition scholarships.

The Hillory M. Wilder Fund, established through bequests of the late Celeste W. Blake and Kenneth W. Blake, provides scholarships or fellowships to aid capable, earnest men and women who are residents of North Carolina and in need of financial assistance to pursue study for the medical profession or medical research.

The Norman M. Sulkin Scholarship Fund provides scholarship assistance to students in a neuroanatomy program leading to the Ph.D. degree in anatomy.

GRADING

Records of progress are kept by this institution on veteran and non-veteran students alike. Progress records are furnished the students, veteran and non-veteran alike, at the end of each scheduled school term.

For all courses carrying graduate credit there are three passing grades — A (excellent), B (good), C (low pass) — and one failing grade, F. An A has the grade point value of three for each semester hour of credit involved, a B the value of two, and a C the value of one.

The grade of I (incomplete) is assigned if an emergency prevents a student from completing the work of a course by the regular time for reporting grades to the Registrar or the Associate Dean for Biomedical Graduate Studies. Grades of I must be removed within one calendar year after the completion of the course or before the submission of the thesis, whichever comes first. After one year an unresolved I automatically becomes an F. In no case is a graduate degree awarded to a student who has an I on record.

Minimum Grade Requirements. A student whose cumulative grade point average falls below 1.5 is required to withdraw from the Graduate School at the close of the semester in which this condition occurs. The grade point average is obtained by dividing the total number of grade points earned by the total number of hours attempted for a grade, including hours for courses in which the grade is F. Thesis credit does not enter into the GPA.

Individual departments may require a higher grade point average than 1.5 for continuing. If there is such a requirement it is stated with the departmental listings under *Courses of Instruction*. Students may also be asked to withdraw for failure to make satisfactory progress in research.

The minimum grade point average required for graduation with the master's degree is 2.0. Ph.D. candidates must have a B average in graduate courses at the time of both the qualifying and the final examinations.

Dropping a Course. With the approval of the Dean of the Graduate School or the Associate Dean for Biomedical Graduate Studies and the department concerned, a student may drop a course during the first six weeks of a semester, or the equivalent

period during a summer term, without penalty. The official record is Drop, followed by the date.

A student who is permitted to drop a course after six weeks is assigned a Drop (with the date) if he or she is doing passing work, or an F if the work is below passing level. Courses marked Drop are not counted in determining the grade point average. Course change forms can be obtained in the Office of the Dean of the Graduate School.

Withdrawal from the University. During the first six weeks of a semester, a student may withdraw from the University without having a grade recorded for courses in progress. Withdrawal procedures should be initiated in the Office of the Dean of the Graduate School or the Associate Dean for Biomedical Graduate Studies. After six weeks, students who withdraw with permission are assigned progress report grades of WP in courses in which they are doing passing work at the time of withdrawal and WF in courses in which their work is below passing level. These grades, which appear on the record as WD (withdrawal from the University), are not counted in credit hours or grade point totals, but are considered if the student applies for readmission. A student who withdraws without the approval of the Dean of the Graduate School or the Associate Dean for Biomedical Graduate Studies and the department concerned is assigned grades of F for all courses in progress.

Grades Assigned:

- A — Excellent*
- B — Good*
- C — Low pass*
- F — Failed (counted as hours attempted)*
- I — Incomplete (becomes passing grade or F)*
- Drop — Official drop (not counted as hours attempted)*
- WP — Withdrew passing (not counted as hours attempted)*
- WF — Withdrew failing (not counted as hours attempted)*
- S — Satisfactory progress on thesis research (credit assigned when thesis accepted)*
- U — Unsatisfactory progress on thesis research*



Tribble Hall

Requirements for Degrees

Degrees Offered

The Graduate School offers graduate programs leading to the Master of Arts, Master of Arts in Education, Master of Science, and Doctor of Philosophy degrees. For a description of the programs of the various departments see *Courses of Instruction*. "Instructions for the Preparation of Theses" can be obtained in the Graduate Office. All candidates who receive graduate degrees in August, December, or May are expected to attend the May Commencement of that school year unless excused by the Dean of the Graduate School or his deputy.

Foreign Language

Some degree programs require a reading examination in a modern foreign language — usually French, German, Russian, or Spanish. Students who wish to improve their knowledge of a language may audit undergraduate classes. Faculty members of the language departments assist in the selection of appropriate courses. For full-time students there is no additional charge for auditing.

Students whose programs of study include a foreign language requirement normally meet it by submitting satisfactory scores on the Graduate School Foreign Language Tests administered by the Educational Testing Service. The tests are given on previously announced dates at the University and at many other places. Testing dates at Wake Forest are in October and April. Arrangements to take the tests may be made in the Office of the Dean of the Graduate School during registration for the fall and spring semesters.

Admission to Candidacy

Admission to graduate standing does not necessarily commit the student or the University to a program of study leading to a graduate degree. Students who wish to become candidates for degrees must file applications for candidacy with the Dean of the Graduate School or the Associate Dean for Biomedical Graduate Studies. Except for doctoral candidates, this may be done after the student has completed one semester of graduate work and met the foreign language or special skill requirements. It must be done at least three months before the graduate degree is conferred.

Requirements for the Master of Arts Degree

Programs of study leading to the Master of Arts degree are offered in the departments of anthropology, biology, English, history, mathematics, physical education, psychology, religion, and speech communication and theatre arts. The degree is awarded to candidates who complete a minimum of twenty-four semester hours of course work with an average grade of B or above on all courses attempted, meet the foreign language or special skills requirements, and write an acceptable thesis for which six hours of credit toward the thirty required for graduation are allotted.

Students may earn additional credit for thesis research, but such hours may not be substituted for the twenty-four hours of course work required.

Residence Requirements. The minimum residence requirement is one academic year or three summer sessions. In practice, most students in the arts require at least one summer session in addition to the academic year, and most science students require two years. At present only the departments of English and history offer programs in which degrees may be earned by summer study alone. In all cases, work for the degree must be completed within six calendar years of the date of initial enrollment in the Graduate School.

Course Requirements. At least twelve of the twenty-four hours in course work (not counting thesis research) required for the degree must be in courses numbered 400 or above. The remaining twelve hours may be in either 300-level or 400-level courses. Credit is allowed for as many as six hours of graduate work transferred from another institution, but the minimum residence requirement is not thereby reduced.

Thesis Requirement. Six of the thirty hours required for the M.A. degree are allotted for the thesis.* The examining committee which determines whether or not a thesis is approved is appointed by the Dean of the Graduate School and consists of at least three members selected from the graduate faculty. The examination is oral and includes both the thesis and the student's field of specialization. Although six semester hours of credit are recorded when a thesis is approved, no letter grade other than S or U is ever assigned for the courses entitled *Thesis Research*. If a U is assigned, the course must be repeated and an S earned before a degree can be awarded.

Foreign Language and Special Skills Requirement. This general requirement may be met by either a reading knowledge of one foreign language or competency in an appropriate skill such as statistics or computer programming and operation. The specific language or skill is determined by the department in which the student is enrolled and reflects the needs of the student for a research tool. (See each department's statement concerning its requirements.)

Requirements for the Master of Arts in Education Degree

Graduate work in education is offered leading to the Master of Arts in Education degree. The minimum residence requirement is one academic year or three summer sessions. Students enrolled on a part-time basis may require a longer period to complete degree requirements. The degree may be earned in teaching, counseling, educational foundations, or school psychology. The degree is awarded to candidates who successfully complete the following requirements within six calendar years of the date of initial enrollment in the Graduate School:

—Demonstrate research competence by passing the required course in Educational Research.

**Theses are written under the supervision of the student's graduate committee (an adviser and a second reader). The department chairman or a deputy appoints the student's committee before the end of the first semester the student is in residence and lists the names of the committee members on the schedule card for the second semester. The student should confer with the chairman concerning the membership of the committee.*

—Complete an approved program with a minimum of thirty semester hours, or more if required in a specific program, with an overall average grade of at least B on all courses attempted. The course requirements in any program must be completed in courses numbered 300 or above, with at least half of the total number of required hours (exclusive of those for the thesis or research report) in courses numbered 400 or above.

—Write a thesis (or optionally, in the counselor's program, a research report), be examined on it, and have it approved by the final examination committee. The examination is oral and includes both the thesis and the student's field of specialization.

In addition to qualifying for admission to the Graduate School, candidates for the M.A. in Education degree seeking North Carolina certification must, where appropriate for the program in question, possess or be qualified for a North Carolina Class A teacher's certificate or its equivalent.

Requirements for the Master of Science Degree

The Master of Science degree is offered on the Reynolda Campus by the departments of chemistry and physics. In the Bowman Gray School of Medicine it is offered by the departments of anatomy, anesthesia, biochemistry, comparative medicine, microbiology and immunology, and physiology and pharmacology, and by the Program in Comparative and Experimental Pathology.

The Master of Science degree in Medical Sciences is offered to qualified students, including medical students and persons holding the M.D., D.V.M., or D.D.S. degrees. This graduate program may be carried out in any department or section of the medical school with the approval of the Committee on Biomedical Graduate Studies. By virtue of extension into the clinical areas of medicine, the scope of the graduate division is broadened and provides the medical student or young clinician with a background for further work in academic medicine.

Residence Requirement. In general, a minimum of twelve months of full-time work or its equivalent in residence is required for the master's degree. For students who have already completed a part of their graduate work, appropriate adjustment of the residence requirement can be made by the Graduate Council. The total allowable time for completion of the degree must not exceed four years.

Course Requirements. A Master of Science degree candidate must have a minimum of thirty semester hours of graduate credit. This minimum requirement can include no more than six hours of research.

Students who have completed at least one year of medical study in the Bowman Gray School of Medicine can offer certain courses in the medical curriculum for credit. Students desiring to transfer from another graduate school are not allowed more than six semester hours of credit for previous course work, except in unusual cases and upon approval of the Graduate Council.

The course of study consisting of classes, seminars, and research is compiled by a group including the student, the student's adviser, and the chairman of the department of the major field of interest. It is recommended that when possible such programs include courses in fields other than that of major interest. At least twelve

semester hours must consist of graduate courses exclusive of courses included in the medical curriculum or 300-level courses on the Reynolda Campus. Sixteen hours of lectures, conferences, or examinations, or thirty-two hours of laboratory work are equivalent to one semester hour of credit.

Thesis Requirement. The thesis embodies the results of the student's research. An original and four carbon copies or photoduplicates of the thesis approved by the department of the major must be submitted to the Committee on Biomedical Graduate Studies or the Dean of the Graduate School two weeks before the examination and at least four weeks before graduation. Three copies of the thesis remain the property of the University. An abstract of approximately 200 words is also required.

Foreign Language and Special Skills Requirement. Candidates for the M.S. degree may be required to have a reading knowledge of a pertinent foreign language or demonstrate competence in a special skill such as computer programming or the use of statistics. The specific language or skill is determined by the student's major department. The language requirement, if any, is normally met by making a satisfactory score on the Graduate School Foreign Language Test. Arrangements to take the test may be made in the Office of the Dean of the Graduate School. In those departments in which a skill is substituted for a foreign language, the department determines the method by which the requirement is met. (See each department's statement concerning its requirements).

Admission to Degree Candidacy. A student is admitted to degree candidacy by the Dean of the Graduate School or the Associate Dean for Biomedical Graduate Studies after recommendation by the major department. The student must have met satisfactorily the foreign languages and special skills requirement and is expected to complete the master's degree requirements by one additional semester's work.

Final Examination. Each candidate for the M.S. degree is examined by a panel of four members of the faculty appointed by the Dean of the Graduate School or the Associate Dean for Biomedical Graduate Studies and including the student's department chairman or a deputy, the adviser, a person outside the department who has knowledge in the area of the thesis and, for Hawthorne Campus students, a member of the Committee on Biomedical Graduate Studies, other than a representative of the major department, who acts as chairman. The examination covers the thesis and knowledge in related areas and is conducted at least ten days prior to graduation. A student may be reexamined only once.

Requirements for the Doctor of Philosophy Degree

Programs of study leading to the Doctor of Philosophy degree are offered in the departments of anatomy, biochemistry, biology, chemistry, microbiology and immunology, physiology and pharmacology, and jointly by the departments of comparative medicine and pathology through the Program in Comparative and Experimental Pathology.

Residence Requirement. A minimum of three years of full-time study, of which at least two must be in full-time residence at the University, is required beyond the bachelor's degree. The total allowable time for completion of the degree must not exceed seven years.

Course Requirements and Advisory Committee. Specific course requirements are not prescribed. Course work is arranged by the student's advisory committee with the approval of the departmental graduate committee to provide mastery of appropriate fields of concentration. The advisory committee is appointed by the chairman of the department and consists of the student's adviser and two other members of the department. Teaching experience during the period of study is encouraged.

Areas of Concentration. Candidates for the Ph.D. degree must have intensive training in a major area of specialization. The student must also have work in at least one related area, in the same or in other departments. The course of study designed to achieve these objectives is planned by the student's advisory committee and is subject to approval by the Graduate Council.

Foreign Language and Special Skills Requirement. This requirement may be fulfilled by demonstrating a reading knowledge of one or more foreign languages or competence in one or more skills such as statistics or computer programming and operation. The specific languages and skills offered by the student are determined on an individual basis by the student's major department. Language requirements are normally met by making satisfactory scores on the Graduate School Foreign Language Tests. Arrangements to take these tests are made at the Office of the Dean of the Graduate School. Each department has its own procedures for meeting special skills requirements. All examinations in language and skills must be successfully passed prior to completing the preliminary examination. (See each department's statement concerning its requirements.)

Preliminary Examination. This examination is conducted by the major department. The examining committee selected by the department includes at least three members, one of whom represents a related concentration area. A single written examination or a series of written examinations should cover all areas of concentration and collateral studies. There may also be an oral examination in which any faculty member invited by the examining committee may participate. Decisions as to passing are made by the examining committee. In case of failure, the committee can recommend that the candidate be dropped or that reexamination be allowed no earlier than six months from the date of the first examination. A student may be reexamined only once. The preliminary examination is normally given near the end of the student's second year of graduate study and must be passed at least twelve months prior to the date of the awarding of the degree.

Admission to Degree Candidacy. A student is admitted to degree candidacy by the Dean of the Graduate School or a deputy after recommendation by the chairman of the major department. Each candidate must have passed the preliminary examination and met satisfactorily the foreign language and special skills requirement.

Dissertation. Under the supervision of an advisory committee, the candidate prepares a dissertation embodying the results of investigative efforts in the field of concentration. The dissertation must be submitted by the department of the major to the Dean of the Graduate School or a deputy at least four weeks prior to the proposed date of graduation and is distributed to the examining committee at least two weeks before the examination. A minimum of five copies (the original and four carbon copies or photoduplicates) must be prepared. Three copies become the property of the University.

At the time the dissertation is submitted, an abstract of 600 words or less must be submitted in duplicate for publication in *Dissertation Abstracts International*. A non-refundable dissertation fee of \$30 covers the cost of this service. Other agencies of publication are encouraged, but such publication does not remove the requirement for submission of the abstract to *Dissertation Abstracts International*.

Final Examination. A final examination covering the student's major field of concentration and the dissertation is held no later than ten days before graduation. The examining panel appointed by the Dean of the Graduate School or a deputy consists of the following five members of the Graduate faculty: the chairman of the major department or a faculty member chosen by the chairman, the student's adviser, another member of the major department, a representative of a related area, and a member from outside the major department who represents the Graduate Council and who serves as chairman. Other faculty members may attend the final examination and participate in the questioning. In case of failure, the panel may recommend that the candidate be dropped or that reexamination be allowed no earlier than six months from the date of the first examination. A student may be reexamined only once. Two weeks prior to the final examination, the candidate must have prepared 100 copies of his or her doctoral program to be submitted to the Dean of the Graduate School or a deputy for distribution.



Manson Meads, vice president for health affairs, and Richard Janeway, dean of the Bowman Gray School of Medicine

Courses of Instruction

Odd-numbered courses are normally taught in the fall and even-numbered courses in the spring. Exceptions are noted after the course descriptions. Semester hours of credit are shown by numerals immediately after the course title—for example, (3) or (3, 3). Some laboratory courses have numerals after the course descriptions, showing hours of recitation and laboratory per week—for example, (2-4). The symbols P— and C— followed by course numbers or titles are used to show prerequisites and corequisites in the department. Many entries show the name of the professor who teaches the course.

Anatomy

Hawthorne Campus

W. Keith O'Steen, Chairman

Professors Walter J. Bo, W. Keith O'Steen

Associate Professors David M. Biddulph, Wayne A. Krueger

Charles E. McCreight, Inglis J. Miller Jr., James E. Turner

Assistant Professors Paul A. Berberian, Craig K. Henkel, P. Kevin Rudeen,
Michael Tytell

The Department of Anatomy offers a graduate program leading to the Ph.D. degree for students interested in research in biologic structure and function and in basic medical sciences.

Areas of research competency demonstrated by members of the faculty include prostaglandin modulation of intracellular lipid in experimental arteriosclerosis; hormonal influences on retinal neurons, cell death and aging; reflex pathways in the brainstem; endocrinology (thyroid and parathyroid, pituitary, female and male reproduction); neurochemistry (pineal gland and hypothalamic neuroendocrinology); growth factors and nervous system regeneration; and taste mechanisms. Newly remodeled facilities support study and research in these areas.

Minor work is available in the fields of biochemistry, microbiology, immunology, physiology, pathology, and radiation biology. Graduate students may take additional courses at the Reynolda Campus.

Each student is required to obtain experience in teaching by assisting in departmental courses.

The foreign language and special skills requirement for the Ph.D. degree may be met by either a reading knowledge of a foreign language or competence in one or more special skills as determined by the student's advisory committee.

Applicants applying for graduate work should have satisfactory prerequisite preparation in biology, including chordate or vertebrate anatomy; in chemistry, including inorganic and organic chemistry; in college physics and mathematics. Students must also present satisfactory scores on the Graduate Record Examinations.

The M.S. was first offered in 1941, the Ph.D. in 1961.

01. Gross Anatomy. (9) A systematic dissection of the human body is made under guidance of the staff. Frequent discussion periods are held in which the laboratory work is reviewed and correlated. A series of lectures and discussions of normal

radiographic anatomy and principles of ultrasound is integrated with the course work. P—Three semesters of biology.

303. Medical Embryology. (1) This course is an introduction to the major concepts of human embryonic and fetal development, including discussions of major congenital abnormalities. P—Permission of instructor.

305. Microanatomy I—Cells and Tissues. (3) A lecture and laboratory course which includes the microscopic, histochemical, and ultrastructural characteristics of cell and intercellular substances, and the major tissues of the body with emphasis placed on functional correlations.

306. Microanatomy II—Organ Systems. (3) A lecture and laboratory course which includes the microscopic structure of the major organ systems of the body with emphasis placed on functional correlations. (2-2) P—305.

400. Special Topics in Developmental Biology. (2) This course deals with selected current topics in the field of developmental biology. The course includes seminar discussions, and reading assignments in the areas of interest. P—Permission of instructor.

401, 402. Special Topics in Gross Anatomy. (1 or 2, 1 or 2) Special dissection of selected structures, as well as discussions, seminars, and reading assignments in special areas of gross anatomy. P—Gross Anatomy.

403, 404. Special Topics in Histology. (1 or 2, 1 or 2) Special preparations and discussions, seminars, and reading assignments in selected areas of histology. P—Permission of instructor.

405, 406. Special Topics in Neuroanatomy. (1 or 2, 1 or 2) Special preparation, reading, and discussions of selected topics dealing with the anatomy, physiology, and chemistry of the nervous system. P—412.

407. Methods in Histological Research. (3) This course presents to the graduate student current concepts of anatomical research, including theoretical considerations of a variety of methods such as histochemistry, autoradiography, cryostat methods, and electron microscopic methods. P—Permission of instructor.

408. Methods in Biological Research. (3) Concepts used by members of the departmental staff in their own research are considered in both theoretical and practical aspects. Autoradiography, endocrinological methods, basic embryonic grafting and tissue culture, selected biochemical assay methods, and neurobiological procedures are considered. P—407 or equivalent and permission of instructor.

410. Cell Biology. (3) Historical and current concepts relating to cell theory, experimental approaches to the study of cells and knowledge of cellular components are discussed in detail. The cell surface, nucleus and cellular organelles are presented in relation to membrane turnover, cell division, cellular growth and energetics, as well as cell motility and regulation. Secretion and the cellular activities of muscle and nerve also are emphasized. P—305 and Biochemistry 391 or 405 or equivalent and permission of instructor.

412. Neuroanatomy. (3) Lecture and laboratory exercises on the structure and



Graduate students have access to open stacks in the Z. Smith Reynolds library.

function of the human central nervous system. Laboratory includes gross dissection, microscopic examination and programmed instruction. Research information will be provided in conferences to supplement lecture and laboratory material. P—Permission of instructor.

414. Endocrinology of the Female Reproductive System. (4) A lecture and laboratory course designed to present concepts of the regulation of ovarian hormones and their effects on the morphology, physiology, and biochemistry of target tissues. (2-4) P—Permission of instructor.

415. Sensory Neurobiology. (3) (One hour major credit allowed for anatomy students.) See Interdisciplinary Courses.

416. Human Developmental Anatomy. (2) This course presents advanced concepts in human development. Both fetal dissections and an in-depth coverage of the original literature on selected topics are included. P—Permission of instructor.

419, 420. Seminar. (1, 1) Research reports presented by students, faculty, and individuals from other departments or institutions. The seminar topic changes each semester.

425, 426. Research. Closely supervised research in various topics in anatomy, including research in preparation for the doctoral dissertation.

Anesthesia

Hawthorne Campus

Thomas H. Irving, Chairman

Professor Thomas H. Irving

Assistant Professors Edward H. Stullken, Raymond C. Roy

The Department of Anesthesia offers a program leading to the Master of Science degree in Anesthesia and designed to prepare students for careers in the teaching of anesthesia and scientific investigation in this field. The Master of Science degree is offered to qualified students holding both the baccalaureate degree and a graduation certificate from an accredited school of nurse anesthesia or accredited residency program. Applicants are required to submit scores on the Graduate Record Examinations and should have maintained a B average in undergraduate studies. Other requirements are in accordance with those prescribed by this bulletin.

A Master of Science candidate must have a minimum of thirty hours of graduate credit, twelve of which will consist of graduate courses numbered 400 or above. The course of study consists of classes and seminars selected by the student and his or her adviser. A thesis is not required for this degree but as a partial substitute a library research paper will be necessary for the completion of the terminal semester of Anesthesia 403, 404. Candidates need not have a foreign language skill but may be required to demonstrate competence in a special skill such as computer programming or the use of statistics. Before admission to degree candidacy by the Associate Dean for Biomedical Graduate Studies, the candidate shall have exhibited proficiency in the administration of anesthesia by having obtained a certified registered nurse anesthetist certificate or an anesthesia residency completion certificate.

Students are expected to obtain a broad background in biochemistry, physiology, and pharmacology (Biochemistry 405, Physiology 392, and Pharmacology 301). The student is expected to take at least seven hours in course work to be chosen from 400 level courses offered by the Departments of Education and Pharmacology.

This program began in 1980.

01. Physicochemical Principles in Anesthesia. (3) This course treats in depth the physiology and mechanics of anesthesia and associated monitoring equipment. Emphasis is on the understanding of the physics involved in the design and operation of anesthetic and monitoring equipment. There is an introduction to computers and a complete review of the pharmacology and physiology of drugs used in anesthetic practice.

03, 404. Seminar. (1, 1) A weekly seminar in anesthesia including special anesthetic techniques, pharmacology, and physiology for the care of patients undergoing surgery, and information on a variety of specialized surgical disciplines.

05, 406. Advanced Topics in Anesthesia. (1, 1) An advanced lecture and student participation course dealing with areas of new knowledge in the art and science of anesthesia.

01, 492. Research in Anesthesia. (Credit to be arranged.)

Anthropology

Reynolda Campus

Stanton K. Tefft, Chairman

Professors Eugene Pendleton Banks, Stanton K. Tefft

Associate Professors David K. Evans, J. Ned Woodall

Assistant Professor David S. Weaver

Adjunct Assistant Professor Jay R. Kaplan

The Department of Anthropology offers a program leading to the M.A. degree in anthropology. The program requires the completion of thirty hours of work, of which six hours are allotted for thesis research. Also required is a demonstrable competence in a special skill or a foreign language. The special skill must be applicable to the student's research interests. At least twelve hours (not counting thesis research) must be in courses numbered above 400, including 452 (Anthropological theory) and either 461 (Methods in Cultural Anthropology), 465 (Methods in Applied Anthropology), 470 (Methods in Physical Anthropology), or 472 (Methods in Archeology). In addition, 380 (Anthropological Statistics) is required for graduation. Students are required to pass a comprehensive examination testing their knowledge in three basic subdisciplines (physical anthropology, archeology, and cultural anthropology) during their third semester in residence. A student must have a passing grade in all course work and a B average or higher for graduation and must submit a thesis and pass an examination on it.

Thesis research normally is oriented toward archeology, physical anthropology, or cultural anthropology. Facilities are provided through the Museum of Man, an affiliate of the department, where there is an active research program in archeology,

physical anthropology, and cultural anthropology as well as opportunities for training and experience in museum work. Students may participate in various contract archeology programs, an internship program with the Archeology Branch of the North Carolina Division of Archives and History, and the study of various archeological and ethnographic collections housed in the Museum. Research in physical anthropology includes paleopathology, nutrition and growth, osteology, primatology, and human evolution. The Primate Research Facility of the Bowman Gray School of Medicine provides additional research facilities for selected students. Research in cultural anthropology includes tribal and peasant studies, political anthropology, museology, and cultural ecology. The department's Overseas Research Center offers an opportunity for field research on problems of developing nations.

An entering student is expected to have an undergraduate degree in anthropology or a closely related discipline, although exceptions may be granted under special circumstances. Enrollment in the program is limited to insure close student/faculty contact throughout the graduate study.

Additional information may be secured from the departmental chairman or the Dean of the Graduate School. Departmental graduate committee: Tefft (chairman), Banks, Evans, Weaver, Woodall.

FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

305. Conflict and Change on Roatan Island (Honduras). (3) Readings and field research focusing upon the barriers and processes of sociocultural and technological change in a heterogeneous island community. *Usually offered in the summer.*

310. Museum Design and Operation. (3) The principles of museum design and operation. Lectures, readings, workshops with visiting experts in the field, and field trips to neighboring museums (possibly to Washington, D.C.). Students have an opportunity to put some of the principles in practice by planning and designing exhibits in the Museum of Man.

321. The Anthropology of Art. (3) The arts (primarily visual) in folk and tribal cultures from comparative, structural and functional points of view.

342. Peoples and Cultures of Latin America. (3) Ethnographic focus on the elements and processes of contemporary Latin American cultures.

343. Anthropology and Developing Nations. (3) Analytic survey of problems facing emerging nations and the application of anthropological theory in culture-change programs.

344. Medical Anthropology. (3) The impact of Western medical practices and theory on non-Western cultures and anthropological contributions to the solution of world health problems.

351. Physical Anthropology. (3) Introduction to biological anthropology; human biology, evolution, and variability.

352. Laboratory Methods in Physical Anthropology. (2) Basic methods utilized by

physical anthropologists to gather data, such as blood grouping, measurement, dermatoglyphics, and dental casting. Lab—two hours.

353. Peoples and Cultures of Africa. (3) The ethnology and prehistory of Negro Africa south of the Sahara. *Not offered in 1982–83.*

354. Primitive Religion. (3) The worldview and values of non-literate cultures as expressed in myths, rituals, and symbols.

355. Language and Culture. (3) Introduction to the relations between language and culture, including methods for field research.

356. Old World Prehistory. (3) Introduction to prehistoric archeology; field and laboratory techniques, with a survey of world prehistory.

358. The American Indian. (3) Ethnology and prehistory of the American Indian.

359. Prehistory of North America. (3) The development of culture in North America as outlined by archeological research, with an emphasis on paleoecology and sociocultural processes.

360. Archeology of the Southeastern United States. (3) A study of human adaptation in the Southeast from the Pleistocene to the present, emphasizing the role of ecological factors in determining the formal aspects of culture.

361. Conservation Archeology. (3) A study of the laws, regulations, policies, programs, and political processes used to conserve prehistoric and historic cultural resources.

362. Human Ecology. (3) The relations between man and the inorganic and organic environments as mediated by culture; laboratory experience with aerial photography and other remote sensing techniques.

364. Human Osteology. (3) A survey of human skeletal anatomy and analysis, emphasizing archeological and anthropological applications.

366. Human and Non-Human Evolution. (3) Investigation of primate and human evolution, both in anatomy and behavior.

371. European Peasant Communities. (3) Lectures, reading, and discussion on selected communities and their sociocultural context, including folklore, folk art, and processes of culture change.

380. Anthropological Statistics. (3) Basic statistics, emphasizing application in anthropological research.

381, 382. Archeological Research. (3,3) The recovery of anthropological data through the use of archeology, taught in the excavation and interpretation of a prehistoric site.

383, 384. Field Research in Cultural Anthropology. (3, 3) Training in techniques for the study of foreign cultures, carried out in the field.

385, 386. Special Problems Seminar. (3,3) Intensive investigation of current scientific research within the discipline, concentrating on problems of contemporary interest.

387. Advanced Statistical Analysis in Anthropology. (3) Principles of multivariate statistical analysis and applications to anthropological problems.

388. Senior Seminar. (3) A review of the contemporary problems in the field of archeology and physical and cultural anthropology.

398, 399. Independent Study. (3, 3) A reading, research, or internship course designed to meet the needs and interests of selected students, to be carried out under the supervision of a departmental faculty member.

FOR GRADUATE STUDENTS

452. Anthropological Theory. (3) A study of the historical and conceptual development of modern anthropological theory with emphasis on 20th century theory. Teacher

461. Seminar: Research Methods in Cultural Anthropology. (3) The use of the scientific method in cultural anthropology; a survey of methods of field work in cultural anthropology and ethnology, with emphasis on the design of field studies and techniques used in collecting and analyzing data and some field work. Ban

465. Seminar: Research Methods in Applied Anthropology. (3) An attempt to assemble the basic cultural factors which must be understood for the successful introduction of change into newly developing nations. The impact of Western technology, thought, and social organization on such societies is stressed. The course attempts to relate anthropological theory about processes of cultural change to practical problems of modern life. Eva

470. Seminar: Research Methods in Physical Anthropology. (3) A survey of current research problems and methods in physical anthropology, concentrating on integrating research problems in physical anthropology with cultural anthropology and archeology. Weav

472. Seminar: Research Methods in Archeology. (3) A study of the literature on research methods in archeology, supplemented by practice in the field and in the laboratory. All phases of archeological research explored, from survey and excavation to analysis and report writing. Wood

485, 486. Directed Reading and Research. (3, 3) Provides graduate students with opportunities for reading in areas not covered by other courses or research not directly related to the thesis project. Sta

491, 492. Thesis Research. (3, 3) Sta

Biochemistry

Hawthorne Campus

Moseley Waite, Chairman

Professors Lawrence R. DeChatelet, Edward J. Modest, Charles N. Remy,

Cornelius F. Strittmatter, Moseley Waite

Associate Professors Carol C. Cunningham, George J. Doellgast,

Frank H. Hulcher, Peter B. Smith

Research Associate Professor Robert L. Wykle

Assistant Professors Ibrahim Z. Ades, Daniel J. Fernandes,

Bill A. Kilpatrick, J. Wallace Parce, Michael J. Thomas,

J. Courtland White

The graduate training program of the Department of Biochemistry is designed to prepare students for careers of investigation and teaching in biochemistry and in related sciences that involve biochemical approaches and techniques. The programs of study are individually planned, although all students are expected to possess competence in certain basic areas of biochemistry and related sciences. Programs leading to either the Ph.D. or the M.S. degree in biochemistry are offered.

To provide a broad, firm basis for advanced work, the initial phase of the student's program generally includes the courses *Biochemistry of Medicine* or *General Biochemistry*, *Biochemical Techniques*, *Literature Seminar*, and correction of any areas of deficiency. Specialization and depth are provided through pertinent advanced courses in biochemistry, including sections of the cyclical sequence of advanced topics in biochemistry, and selected courses in other departments. The student also participates in the department's program of research seminars and may obtain guided teaching experience. A requirement for competence in a special research skill may be included in the course of study if pertinent to the student's area of interest and career plans.

Thesis research under the supervision of a faculty member may be pursued in various areas of biochemistry, including enzymology, membrane structure and function in excitable tissues, relation of lipid and protein metabolism and of protein-lipid association to membrane structure and function, immunochemistry of enzymes, biological oxidations and bioenergetics, intermediary metabolism, biochemical control mechanisms, biochemistry of development, molecular genetics and nucleic acid function, biophysics, relations of structure to function in enzymes and other proteins, oncology, and leukocyte metabolism and function. The department has specialized equipment and facilities to support training and investigation in these areas.

The M.S. degree has been offered since 1941, the Ph.D. since 1962.

401. Biochemistry of Medicine. (7) A lecture-conference course in general biochemistry that covers the basic areas of biophysical chemistry, enzymology, metabolism, molecular genetics, and the physiological chemistry of tissues and cells. This course provides the student with a broad exposure to the various areas of biochemistry. P—General and organic chemistry and permission of instructor. Staff

400, 401. Biochemistry Literature Seminar. (1, 1) Presentations and discussions by students and staff members. Meets weekly.

402, 403. Introduction to Biochemical Research. (1-5 credit to be arranged) Con-

ferences on biochemical literature, the planning and execution of research, and the interpretation and presentation of experimental results. To put these principles in practice, individualized laboratory projects are carried out under the supervision of staff members.

Waite, Sta

404. Advanced Topics in Biochemistry. (2-8) An advanced lecture/conference course that considers various areas of current interest or rapid development in a two-year cycle (one semester each year). Individual sections of the course may be taken separately for credit. (Maximum total credit 14 hours.) Topics to be covered, 1982-83 are: (a) metabolic control and development, 2 hours (Strittmatter); (b) biochemistry of excitable tissue, 2 hours (Smith). P—391 or equivalent.

405. General Biochemistry. (5) Lectures and problem sessions to provide rigorous and intensive treatment of general biochemical topics for graduate students. Emphasis is on development of a working knowledge of biochemical material, including quantitative relationships. P—General and organic chemistry and permission of instructor.

Sta

406. Physical Biochemistry. (3) Consideration of physical and physicochemical concepts and their application to biochemical research. Lectures and discussions, problems and laboratory sessions. P—General biochemistry and physical chemistry or equivalent. *Offered in odd-numbered years.*

Par

407. Biochemical Techniques. (2) Theory and application of selected important biochemical laboratory techniques. Lectures, problems, and laboratory. P or C—391, 405, or equivalent exposure to biochemistry.

Doellga, St

408. Enzymology. (2) The nature of enzymes, enzyme kinetics, and mechanisms of action, and of methods employed in enzyme studies. Lectures, discussions, and problems. P—General biochemistry or equivalent. *Offered in even-numbered years.*

Cunningha

410. Biochemistry and Function of Blood Components. (3) The course offers intensive exposure to the morphology, biochemistry, and function of the various components of human blood. Lectures concentrate on the individual components, including erythrocytes, leukocytes, platelets, and humoral factors such as the complement cascade and the clotting mechanism. Emphasis on normal cellular metabolism and aberrations in metabolism in various disease states. P—General biochemistry or permission of instructor. *Offered in odd-numbered years.*

DeChate

412. Immunochemistry. (2) Structures of antibodies and their synthesis, the structure of antigenic determinants, complement, qualitative and quantitative techniques. The course attempts to provide a working knowledge of immunochemistry as a basic research tool in biochemistry and to introduce the student to the structural components of antibodies and antigens which make it possible to develop such a diverse repertoire of specific antibodies during the immune response. P—391, general biochemistry or equivalent. *Offered in even-numbered years.*

Doellga

414. Instrumental Techniques. (3) This course will present theory and technical aspects of instrumentation currently employed in the biological sciences. Experience will be provided on a variety of instruments including high performance liquid

romatographs; gas chromatographs; gas chromatograph/mass spectrometer; nuclear magnetic resonance spectrometer; electron paramagnetic resonance spectrometer; ultraviolet, visible and infrared spectrophotometers; spectrofluorometers; and cell sorter/cytofluorograph. (2-2). P—Chemistry through physical chemistry and two semesters of physics or permission of instructor.

Thomas, Staff

19, 420. Research. The department offers opportunities for investigation in a wide variety of biochemical subjects under the guidance of staff members. Staff

Biology

Reynolda Campus

Gerald W. Esch, Chairman

Professors Charles M. Allen, Ralph D. Amen, Gerald W. Esch, Mordecai J. Jaffe,
Raymond E. Kuhn, James C. McDonald, Robert L. Sullivan, Peter D. Weigl,
Raymond L. Wyatt

Associate Professors Ronald V. Dimock Jr., Herman E. Eure, A. Thomas Olive
Assistant Professors Ramunas Bigelis, Carole L. Browne, Robert A. Browne,
Hugo C. Lane

Adjunct Professors Harold O. Goodman, Stephen H. Richardson

Adjunct Associate Professor J. Whitfield Gibbons

The Department of Biology offers programs of study leading to the M.A. and Ph.D. degrees.

For admission to graduate work, the department requires an undergraduate major in the biological sciences or the equivalent (thirty semester hours or eight courses in biology, including some botany and zoology, beyond a general course), plus at least four semesters of work in the physical sciences. Any deficiencies in these areas must be removed prior to admission to candidacy for a graduate degree.

At the master's level the department emphasizes broad biological training rather than narrow specialization. Current research opportunities include physiological ecology, organismal physiology, animal behavior, plant and animal systematics, immunology, cell biology, parasitology, and population and community biology. It should be noted that graduate students desiring to use work taken in biology for graduate teacher certification should consult the Department of Education before applying for candidacy.

At the doctoral level few specific requirements are prescribed. Under the guidance of the student's faculty adviser and advisory committee and with the approval of the departmental graduate committee, individual programs are designed for each student. As a supplement to or a substitution for part of the formal course work, the department has established a special Tutorial Program. This program brings to campus each year three to five outstanding biologists to direct and participate in a series of seminars and discussion sessions with doctoral candidates. The areas cov-

ered by the Tutorial Program vary from year to year. In the past several years the program has emphasized genetics, physiological ecology, biosystematics, population ecology, and parasitology.

The limited enrollment in the Ph.D. program dictates that prospective students be accepted into that program only after it has been determined that their interests are compatible with the areas of expertise represented by the faculty. Prospective Ph.D. students are encouraged to correspond with staff members whose areas of interest may seem compatible with their own. Additional information is available from the chairman of the departmental graduate committee.

Graduate study often requires the use of special research tools and skills such as computer work or foreign languages. Candidates for the M.A. degree must demonstrate proficiency with one such special skill; Ph.D. candidates must be competent with two skills. The student's advisory committee determines in consultation with the student and with the approval of the departmental graduate committee the specific areas and demonstrations of competence associated with these skills requirements. Specific course work in areas such as biometrics and electron microscopy may be used to satisfy a skill requirement, if approved by the advisory committee. A course used to satisfy that requirement may not be counted in the credit hours required for the M.A. degree.

At least one year of teaching, *e.g.* as a teaching assistant, is required of all Ph.D. students during their tenure.

All M.A. and Ph.D. students must take Biology 415 and 416.

In order to remain a bona fide graduate student in the department, the student must maintain a B average in all courses attempted. Any time this condition is not met the student must reapply for acceptance into the program.

Wake Forest is an institutional member of the Highlands Biological Station, which offers research facilities in a high mountain area rich in transitional flora and fauna. The department has a field station situated on Belews Lake, about twenty miles from the Reynolda Campus.

Study leading to the M.A. degree was inaugurated in 1961. The Ph.D. degree program began in September 1970. Departmental graduate committee: Dimock (chairman), Eure, Kuhn, Sullivan, and one graduate student.

FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

312. Genetics. (4) A study of the principles of inheritance and their application to plants and animals, including man. Laboratory work in the methods of breeding some genetically important organisms and of compiling and presenting data.

Sullivan

314. Evolution. (3) Analysis of the theories, evidences, and mechanisms of evolution.

All

320. Chordates. (4) A study of chordate animals, with emphasis on comparative anatomy and phylogeny. Dissection of representative forms in the laboratory. All

- 21. Parasitology.** (4) A survey of protozoan, helminth, and arthropod parasites from the standpoint of morphology, taxonomy, life histories, and host/parasite relationships. Esch, Eure
- 23. Animal Behavior.** (3) A survey of laboratory and field research on animal behavior. This course may count as biology or psychology, but not both; choice to be determined at registration. Falkenberg, Weigl
- 25. Plant Anatomy.** (4) A study of comparative anatomy of the vascular plants, with emphasis on phylogeny and anatomical microtechniques. Wyatt
- 26. Microbiology.** (5) The structure, function, and taxonomy of microorganisms with emphasis on the bacteria. Some immunological processes are considered. McDonald
- 27. Non-Vascular Plants.** (4) An examination of representative non-vascular plants, with emphasis on morphology and phylogeny. McDonald
- 28. Vascular Plants.** (4) A comparative survey of the vascular plants, with emphasis on structure, reproduction, classification, and phylogeny. Wyatt
- 31. Invertebrates.** (4) Systematic study of invertebrates, with emphasis on functional morphology, behavior, ecology, and phylogeny. Dimock
- 33. Vertebrates.** (4) Systematic study of vertebrates, with emphasis on evolution, physiology, behavior, and ecology. Laboratory devoted to systematic, field, and experimental studies. Weigl
- 34. Entomology.** (4) A study of insects, with emphasis on structure, development, taxonomy, and phylogeny. Olive
- 38. Plant Taxonomy.** (4) A study of the classification of seed plants, with emphasis on a comparative study of orders and families. Wyatt
- 40. Ecology.** (4) Interrelationships among living systems and their environments. Structure and dynamics of major ecosystem types. Contemporary problems in ecology. Weigl, Amen
- 41. Marine Biology.** (4) An introduction to the physical, chemical, and biological parameters affecting the distribution of marine organisms. Dimock
- 42. Aquatic Ecology.** (4) A course designed to cover the general principles and concepts of limnology and aquatic biology as they apply to lentic and lotic habitats. A major portion of the field studies centered at the C. M. Allen Biological Station. R. Browne, Esch
- 48. Quantitative Biology.** (3) An introduction to statistical methods used by biologists, including basic statistical parameters, analysis of variance, regression and correlation, and non-parametric analysis. R. Browne
- 50. Physiology.** (4) A lecture/laboratory course dealing with the physicochemical functions common to multicellular organisms, with emphasis on the principles and processes of nutrition, metabolism, development, and behavior. (3-3). Amen, Jaffe, Lane

351. Animal Physiology. (4) A lecture and laboratory course which discusses and demonstrates the principles of bioelectricity and biomechanics. Regulatory principles and the physiology of the cardiovascular, respiratory and renal systems of vertebrates are covered. (3-3). Lan

352. Plant Physiology. (4) A study of the mechanisms by which various plant systems function, thematically structured around the plant life cycle. (3-3). Amen, Jaff

354. Endocrinology. (3) A lecture course which explores the evolution of hormone and endocrine glands, and the physiology of the main endocrine systems of vertebrates. The last part of the course will involve group presentations of clinical case histories in endocrine homeostasis. Lan

355. Developmental Physiology. (4) The application of the principles and postulates of molecular biology to the phenomenon of development in multicellular organisms with emphasis on the genetic and hormonal mechanisms of differentiation, totipotency, and morphogenesis. (3-3). Ame

357. Cryptobiology. (3) The genetic and physiologic mechanisms of common states of biotic rest in multicellular organisms: quiescence, dormancy, diapause, hibernation, estivation, sleep, and coma. Focus will be on the relation of states of biotic rest to senescence and death. Ame

360. Development. (4) A study of development, including aspects of vertebrate, invertebrate, and other developmental systems, emphasizing the regulation of differentiation. Kuh

362. Immunology. (3) A study of the components and protective mechanisms of the immune system. Kuh

370. Biochemistry. (4) A lecture/laboratory course including principles of biochemistry, chemical composition of living systems, intermediary metabolism, enzyme kinetics, biochemical energetics, and biochemical techniques. (3-3). Bigel

372. Histology. (4) A study of the structure and function of cells, tissues, and organs with laboratory for examination of prepared histological slides. C. Brown

374. Microtechnique. (3) An introduction to the biological application of light and electron microscopy. C. Brown

375. Regulation of Biochemical Processes. (3) An advanced biochemistry course with an emphasis on processes that regulate metabolism at both the cellular and organismal levels. Consideration will be given to molecular mechanisms as well as the physiological consequences. Prerequisite: Introductory biochemistry. Bigel

376. Ichthyology. (4) A comparative study of the structure/function, classification and phylogeny of fish. Eu

391, 392, 393, 394. Special Problems in Biology. (1, 1, 1, 1) Independent library and laboratory investigation carried out under the supervision of a member of the staff—Permission of instructor. Sta

395. Philosophy of Biology. (3) Lecture/seminar course dealing with the rational structure of the biologic sciences with emphasis on the reductionistic, organismic, and teleonomic paradigms and theories of modern biology. The structure of major bio-scientific theories will receive emphasis. Amen

397. Seminar in Biology. (3) Consideration of major biological topics through intensive reading and discussions. Staff

398. Scientific Communications. (2) An introduction to bibliographic and graphic methods, including microscopy, photography, scientific illustration and writing, and preparation of manuscripts. P—Permission of instructor. Olive

All 300 level courses presume a background equivalent to at least *Introductory* and *Intermediate Biology* (111, 150-152).

FOR GRADUATE STUDENTS

401-408. Topics in Biology. (1-4) Seminar courses in selected topics, some involving laboratory instruction. At least one offered each semester. Staff

411, 412. Directed Study in Biology. (1,1) Reading and/or laboratory problems carried out under and by permission of a faculty member. Staff

415. Seminar in Molecular and Cellular Biology. (2) Advanced topics in cellular and subcellular biology. Staff

416. Seminar in Organismal and Evolutionary Biology. (2) The consideration of advanced topics in the functional aspects of organisms and ecosystems. Staff

420. Genetics (Cytogenetics). (4) An advanced course stressing genetic mechanisms and their biological significance. Bigelis, Sullivan

430. Invertebrate Zoology. (4) Emphasis on the physiology and ecology of invertebrate animals. Dimock

433. Vertebrate Zoology. (4) A study of certain aspects of vertebrate physiology, behavior, ecology, and functional morphology. Laboratory devoted to special experimental and field studies. Weigl

440. Physiological Ecology. (4) Intensive study of the sensitivity and behavioral responses of organisms to environmental cues. Amen, Dimock, Jaffe

450. Cellular Physiology. (4) An advanced course stressing the ultrastructure and functions of cells and organelles. C. Browne

460. Developmental Biology. (4) An advanced course in the regulation of developmental systems. Amen, Kuhn

462. Immunology. (4) Humoral and cellular immune responses are examined to understand the basic immunobiology of vertebrates with special emphasis on cell-cell interactions and immunoregulation. Laboratory experiments introduce students to basic methods in immunological research. Kuhn

480. Biosystematics. (4) An examination of the principles of systematics and phylogenetic relations. Olive, Wyatt

491, 492. Thesis Research. (3,3) Staf

591, 592. Dissertation Research. (Hours open) Staf

Biostatistics and Epidemiology

Hawthorne Campus

Assistant Professors Wayne T. Corbett, Harry M. Schey

404. Principles of Epidemiology. (3) A review of the basic concepts of epidemiology, including community diagnosis, analytical techniques, and evaluation of preventive methods. Examples of both acute and chronic diseases covered in the lectures laboratory, and discussion groups. (2-2). P—Statistics course or equivalent. Corbett

405. Introduction to Statistics. (3) Descriptive statistics, measures of central tendency and dispersion; basic probability theory, probability distributions; estimation and hypothesis testing; simple regression and correlation; analysis of frequencies; nonparametric methods. Schey

406. Applied Linear Models. (3) Simple and multiple regression; estimation and hypothesis testing; matrix methods; one- and two-way analysis of variance; elements of statistical design. P—405 or permission of instructor. Schey

420. Multivariate Statistical Analysis. (3) Topics in matrix algebra, with emphasis on statistical estimation and tests of significance of general multivariate regression and analysis of variance models. P—405 and 406 or permission of instructor.

Chemistry

Reynolda Campus

Ronald E. Nofle, Chairman

Professors H. Wallace Baird, Phillip J. Hamrick Jr., Roger A. Hegstrom,

Harry B. Miller, Ronald E. Nofle, John W. Nowell

Associate Professors Paul M. Gross Jr., Willie L. Hinze

Assistant Professors Charles F. Jackels, Susan C. Jackels, Richard R. M. Jones

The Department of Chemistry offers programs of study leading to the M.S. and Ph.D. degrees. Opportunities for study in courses and through research are available in analytical, inorganic, organic, physical, and theoretical chemistry. Research plays a major role in the graduate program. Since the number of graduate students is not large, the research program of the individual student is enhanced by close contact with the faculty.

All applicants for graduate work in the department are expected to offer preparation college-level fundamental courses in general, analytical, organic, and physical chemistry; physics; and mathematics through one year of calculus. During registration all new graduate students take qualifier examinations covering the field of analytical, inorganic, organic, and physical chemistry. Programs of study are partly determined by the results of these examinations, and deficiencies are to be remedied during the student's first academic year.

For the M.S. degree, the student is expected to undertake a broad program of course work at an advanced level and to complete successfully an original investigation. This investigation must be of the highest quality but necessarily limited in scope. The student must also demonstrate either a reading competence in one foreign language or a competence in one special skills area. The choice of a particular foreign language or special skill is to be approved by the graduate committee. Students who hold assistantships normally spend two years in residence for the completion of this degree.

For the Ph.D. degree, individual programs are designed for each student under the guidance of the student's faculty adviser and advisory committee and with the approval of the graduate committee. The University preliminary examination requirement is satisfied by successful completion of a series of written cumulative examinations and by presentation of two research proposals, one of which is the dissertation research project. Demonstration of a reading competence in one foreign language is required, with the choice of language being subject to approval of the graduate committee. Each student is to present two departmental seminars, one of which will be on the results of his or her dissertation research. The student must present a dissertation and pass an examination on it as prescribed by the Graduate School, and other University requirements must be satisfied.

The original graduate program, which led to the M.S. degree, was discontinued in 1949. The present M.S. program was begun in 1961, the Ph.D. in 1972. Departmental graduate committee: C. Jackels (chairman), Baird, Hinze, Jones.

FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

323. Organic Analysis. (4) The systematic identification of organic compounds. (3-4). P—222.

324. Chemical Synthesis. (2 or 3) A library, conference, and laboratory course. Four or eight hours per week. P—222.

334. Chemical Analysis. (3 or 4) Theoretical and practical applications of modern methods of chemical analysis. (3-4). C—341.

341, 342. Physical Chemistry. (4, 4) Fundamentals of physical chemistry. (3-4). —112, Mathematics 112, C—Physics 111-112.

351, 362. Inorganic Chemistry. (3 or 4, 3) Principles and reactions of inorganic chemistry. (3-4, 3). C—341.

371. Introductory Quantum Chemistry. (3) Introduction to the quantum theory and its application to chemical systems. (3-0). P—342 or permission of instructor.

381, 382. Chemistry Seminar. Discussions of contemporary research. Attendance required of all graduate students and all chemistry majors. No credit.

Departmental graduate committee approval required.

 FOR GRADUATE STUDENTS

- 411, 412. Directed Study In Chemistry.** (1 or 2, 1 or 2) Reading and/or laboratory problems carried out under supervision of a faculty member. P—Permission of graduate committee. Staff
- 421, 422. Advanced Organic Chemistry.** (3, 3) Principles of organic chemistry, with particular emphasis on reaction mechanisms. Hamrick, Jones, Miller
- 431, 432. Advanced Analytical Chemistry.** (3, 3) Principles and practical applications of analytical methods, with particular emphasis on modern spectral methods, electroanalytical methods, and chemical separations. Hinz
- 441. Molecular Structure.** (3) The relationship of spectroscopic, dipole moment, diffraction, and other physical data to molecular structure. *Spring only* Susan Jackels, Noftel
- 445. Thermodynamics.** (3) A study of the application of the principles of thermodynamics to homogeneous and heterogeneous equilibria. Baird, Nowell
- 446. Chemical Kinetics.** (3) The application of kinetic theory to the study of chemical reactions. Baird, Charles Jackel
- 447. Chemical Bonding.** (3) A study of the electronic structure of atoms, molecules, and ions. Hegstrom, Charles Jackel
- 461. Coordination Chemistry.** (3) Theory, structure, properties, and selected reaction mechanisms of transition metal complexes. Susan Jackels, Noftel
- 462. Advanced Inorganic Chemistry.** (3) Application of theoretical principles to the study of inorganic chemistry, with emphasis on classes of compounds. Susan Jackels, Noftel
- 471. Quantum Chemistry.** (3) The quantum theory and its application to the structure, properties, and interactions of atoms and molecules. P—371 or its equivalent Hegstrom, Charles Jackel
- 475. Statistical Mechanics.** (3) The study of the properties of macroscopic systems arising from the properties and interactions of the constituent molecules. P—371 or its equivalent. Hegstrom, Charles Jackel
- 491, 492. Thesis Research.** (3, 3) Staff
- 529. Tutorial in Organic Chemistry.** (3) Hamrick, Jones, Miller
- 539. Tutorial in Analytical Chemistry.** (3) Hinz
- 549. Tutorial in Physical Chemistry.** (3) Baird, Gross, Hegstrom, Charles Jackel
- 569. Tutorial in Inorganic Chemistry.** (3) Susan Jackels, Noftel
- 579. Tutorial in Theoretical Chemistry.** (3) Hegstrom, Charles Jackel
- 591, 592. Dissertation Research.** (Hours open) Staff

Comparative Medicine

Hawthorne Campus

Thomas B. Clarkson Jr., Chairman

Professor Thomas B. Clarkson Jr.

Associate Professors Bill C. Bullock, Noel D. M. Lehner, Lawrence L. Rudel,
William D. Wagner

Assistant Professors M. Gene Bond, Jay R. Kaplan

The Department of Comparative Medicine offers a program leading to the M.S. degree in comparative medicine for students who hold the D.V.M. degree and, in conjunction with the Department of Pathology, it offers the M.S. and Ph.D. degrees in comparative and experimental pathology (see Interdisciplinary Program).

Research is an important facet of departmental activity, and research training is emphasized in its educational program. Investigative efforts focus on the biology and diseases of animals, their maintenance and use in the laboratory, and their relationship to humans and human disorders. A major interest is comparative atherosclerosis, including morphologic and metabolic characteristics of atherosclerotic lesions in a variety of animal species.

With the trend toward the use of increasing numbers of primates in research related to human health, there is an active interest in the biology and diseases of primates. A colony of approximately 1,000 primates of several species is maintained to provide ample material for students interested in primate biology. A large colony of pigeons, specially bred and maintained for atherosclerosis research, also provides opportunities for research in genetics, oncology, and infectious diseases.

The foreign language and special skills requirements for the M.S. degree may be met by either a reading knowledge of a foreign language or a special skill such as biostatistics, computer programming, electrocardiography, or electroencephalography. In selecting an appropriate language or skill, the department is guided by the student's background and interests.

The M.S. degree has been offered since 1964.

01. Introduction to Animal Experimentation. (3) Designed to provide the student with a knowledge of the biology and care of the commonly used laboratory animals. Emphasis is on strains, sources, anatomy, physiology, and nutrition. Techniques of substances administration, specimen collection, and anesthesia are discussed and competence achieved by the student during laboratory exercises. P—B.S. in biology or equivalent.

Clarkson, Staff

01, 402. Diseases of Laboratory Animals. (5, 5) A two-semester course in which the naturally occurring diseases of laboratory animals are considered in depth. The lecture portion of the courses is arranged by animal species to consider the prevalence and physiological and pathological expression of both infectious and metabolic/regenerative diseases. Emphasis is on diagnostic and control methods and in particular on the effect of these diseases on experimental animal variation. The laboratory portion involves the investigation of animal diseases by clinical laboratory methods and the post mortem diagnosis of laboratory animal disease by pathologic and microbiologic methods. Emphasis on animal necropsy methods and storage-retrieval



Associate Professor William D. Wagner and graduate students Carol Marzetta (left) and Mar Fesler using electrophoresis equipment to study arterial wall polysaccharides

of data obtained from the necropsy laboratory. P—D.V.M. or M.D. degree or permission of instructor. *Offered in odd-numbered years.* Bullock

404. Animal Models in Biomedical Research. (5) Designed to provide the student with the current knowledge about animal models used in biomedical research. The major disease problems of man are discussed by organ system. For each disease problem, the advantages and disadvantages of animal models in current use are discussed. Both experimentally induced and naturally occurring diseases of animals are considered. P—D.V.M. or M.D. degree or permission of instructor. *Offered in even-numbered years.* Clarkson, Staff

405. Basic Primatology. (3) Acquaints the student with the taxonomic classification and geographical distribution of the non-human primates of biomedical interest. Additional emphasis on social structure and population dynamics of free-ranging groups of primates and social structures of laboratory primate groups. P—Permission of instructor. *Offered in odd-numbered years.* Kaplan

406. Medical Primatology. (3) Designed to acquaint the student with the anatomic and physiologic characteristics and diseases of non-human primates. Emphasis on the clinical manifestations, diagnosis, pathologic characteristics, and management of infectious diseases which are the principal causes of morbidity and mortality in laboratory primates. P—Two semesters of pathology. *Offered in even-numbered years.* Lehner, Staff

408. Primate Ethology. (3) Introduces the student to current concepts of primate behavior, especially as behavior is influenced by environment, to increase understanding of psychosocial influences on disease processes. P—Permission of instructor. *Offered in odd-numbered years.* Kaplan

409, 410. Advanced Topics in Comparative Medicine. (Credit to be arranged, 1-5) An advanced lecture and student participation course dealing with areas of new knowledge in comparative medicine. P—General biochemistry, general pathology, or equivalents. Staff

411, 412. Necropsy Conference. (1, 1) Necropsy cases are presented and discussed by postdoctoral fellows and staff. Management of current medical problems and the comparative aspects of the materials presented are emphasized. Staff

413, 414. Research. The department offers research in a variety of topics in laboratory animal medicine, including research in preparation for the master's thesis and the doctoral dissertation. Staff

Education

Reynolda Campus

Joseph O. Milner, Chairman

Professors Thomas M. Elmore, John E. Parker Jr., Herman J. Preseren,
J. Don Reeves

Associate Professors John H. Litcher, Joseph O. Milner

Assistant Professors Patricia M. Cunningham, Linda N. Nielsen,
Leonard P. Roberge

The graduate degree is offered in seven fields, with certificate programs in five. Individual programs of study, which are planned jointly by the students and the committees, are based upon students' vocational objectives and educational backgrounds. The courses taught in the department may be used also for the renewal of school certificates.

Certificate Programs

Graduate Secondary Teacher's Certificate (7-12). The M.A. in Education degree is awarded to the candidate with a North Carolina Class A teacher's certificate or its equivalent who completes successfully a minimum of thirty semester hours of work including six hours for the thesis, six hours in professional education, and eighteen hours in biology, chemistry, English, history, mathematics, physical education, physics, or speech.

For the candidate who desires the degree in two teaching areas the requirements in professional education are the same. The academic field study is twenty-four or more semester hours, with at least twelve hours in each of the two teaching fields. The thesis is written in one of the two fields. This program requires the completion of thirty-six semester hours.

Graduate Elementary Teacher's Certificate (K-3, 4-9). The M.A. in Education degree is awarded to the candidate with a North Carolina Class A teacher's certificate or its equivalent who completes successfully a minimum of thirty semester hours of work including six hours for the thesis. (Approval of program by North Carolina Department of Public Instruction pending. Contact the Chairman of the Education Department for further information.)

School Counselor's Certificate. The M.A. in Education degree is awarded to candidates for the school counselor's certificate who successfully complete a program of study based on the requirements of the North Carolina State Board of Education and in keeping with the background and needs of the student. The program usually consists of at least forty hours distributed between professional education and psychology, plus six to twelve hours assigned for internship and counseling laboratory, including the research report.

School Psychologist II—Psychometrist Certificate. The M.A. in Education degree is awarded to candidates for the School Psychologist II—Psychometrist certificate who successfully complete a minimum of forty semester hours of course work, plus six to twelve hours assigned for practicum and internship, including a research report in a program of study based on the requirements of the North Carolina State Board

Education and in keeping with the background and needs of the student. The student can readily earn dual certification as a School Counselor and School Psychologist II—Psychometrist.

Graduate Gifted and Talented Certificate (K-12) The M.A. in Education degree is awarded to the candidate with a North Carolina Class A teacher's certificate or its equivalent who completes successfully a minimum of thirty-three semester hours of work, including six hours for the thesis.

General Programs

Counseling. The M.A. in Education degree is awarded to candidates who successfully complete a minimum of forty-eight semester hours, a comprehensive examination, and a thesis or research report in counseling, education, or related fields. A common core of courses is taken, with some degree of specialization to prepare students for employment in a variety of educational and community service agencies.

Educational Foundations. The M.A. in Education degree is awarded to candidates who successfully complete a minimum of thirty semester hours, including six hours for the thesis or internship report and six hours in the Department of Education. The additional hours are selected from courses in Education and other departments to meet the specialized needs and interests of the candidate. State teacher certification cannot be earned through this program.

Master of Arts. Master of Arts degree candidates in the academic areas who hold a Class A certificate may be recommended for a G certificate in teaching if an additional six semester hours of education are taken in the Department of Education. Candidates should consult the Department of Education.

A program of study leading to the M.A. in Education degree has been offered since 1967. Departmental graduate committee: Reeves (chairman), Elmore, Parker.

FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

01. Audio-Visual Education. (3) A survey of the theory, history, and techniques of using audio-visual instruments and their relation to the current educational program. *Repeated spring and summer.*

Preseren

02. Production of Instructional Materials. (3) Methods of producing instructional materials and other technological techniques. P—301 and senior or graduate standing. *Repeated summer.*

Preseren

03. History of Western Education. (3) Educational theory and practice from ancient times through the modern period, including American education. Reeves

04. Theories of Education. (3) Contemporary proposals for educational theory and practice studies in the context of social issues.

Reeves

06. Studies in the History and Philosophy of Education. (3) A study of selected historical eras, influential thinkers, or crucial problems in education. Topics announced annually.

Reeves

313. Human Growth and Development. (3) Theories of childhood and adolescent development, their relation to empirical research, and their educational implications. Consideration of the relation to learning of physical, intellectual, emotional, social, and moral development in childhood and adolescence. Clar

323. Educational Statistics. (3) Descriptive, inferential, and non-parametric statistical procedures involved in educational research. Not open to students who have taken Psychology 211 and 212. P—Permission of instructor. Nielsen

341. Principles of Counseling and Guidance. (3) Counseling history, philosophy, theory, procedure, and process. Therapeutic and developmental counseling approaches in guidance and personnel work in educational, social, business, and community service agencies. *Repeated spring and summer.* Elmore, Roberg

383. Reading in the Content Areas. (3) An introduction to teaching the basic reading skills at the intermediate and secondary level; vocabulary, comprehension, reading rate, selection of texts, and critical and interpretive reading. Particularly stressed are diagnoses of reading problems and techniques for correcting these problems in specific subject content areas. Cunningham

390. Education of Exceptional Persons (2) A survey of the types of exceptionality. Emphasis will be placed on characteristics, identification, educational programming, management, and evaluation. Litche

391. Teaching the Gifted. (3) A general investigation of the theory and practice which have special meaning for the gifted child, including an examination of general curricular matters, such as classroom styles, learning modes, epistemological theories, developmental constructs, and psychosociological patterns which have special pertinence to the teacher of the gifted. Milne

393. Individual Study. (3) A project in the area of study not otherwise available in the department; permitted upon departmental approval of petition presented by a qualified student. Staff

FOR GRADUATE STUDENTS

405. Sociology of Education. (3) A study of contemporary society and education including goals and values, institutional culture, and the teaching/learning process. Reeve

407. Philosophy of Education. (3) Survey of philosophical systems and their influence on education. Philosophical foundations of educational theories. Analysis of educational issues and problems. Reeve

411. Reading Theory and Practice. (3) A study of current reading theory and consideration of its application in the teaching of reading, grades K-12. Cunningham

413. Psychology of Learning: Classroom Motivation and Discipline. (3) Study of the nature and fundamental principles of learning. Major learning theories and their

implications for teaching problems. Cognitive processes, concept-formation, problem-solving, transfer of learning, creative thinking, and the learning of attitudes, beliefs, and values. Research in learning. *Spring*.
Nielsen

414. Instructional Strategies and Evaluation. (3) Application of learning theories to instructional strategies and techniques and evaluation of various assessment techniques.
Litcher

421. Educational Research. (3) Theory, construction, and procedures of empirical research dealing with educational problems. Analysis and evaluation of research studies; experience in the design and execution of research studies.
Clark

431. Foundations of Curriculum Development. (3) Philosophical, psychological, and social influences on the school curriculum. Examination of both theoretical and practical curriculum patterns for the modern school. Processes of curriculum development, including the leadership function of administration and research. *Spring*.
Parker

433. Supervision of Instruction. (3) An analysis of various techniques of supervision; orientation of teachers, in-service education, classroom observation, individual follow-up conferences, ways to evaluate instruction, and methods for initiating changes.
Parker

435. Appraisal Procedures for Counselors. (3) An overview of the development, interpretation, and application of tests of achievement, aptitude, interest, personality, intelligence, and other inventories commonly employed by counselors. Issues in appraisal techniques and pertinent concepts of measurement discussed. Roberge

436. Advanced Appraisal Procedures. (3) Appraisal, assessment, and diagnosis of emotional, intellectual, personality, and learning disorders found in schools and human service agencies.
Staff

441. Theories and Models of Counseling. (3) The study of theoretical bases and approaches to counseling, including psychoanalytic, behavioristic, existential, phenomenological, and eclectic; the process of counseling within these approaches.
Roberge

442. Group Procedures in Counseling. (3) An experiential and conceptual exploration of the psychological dynamics and interpersonal communication of small groups, including the purpose and process of group procedures, such as group guidance, group counseling, T-groups, encounter groups, sensitivity training, psychodrama, and sensory awareness techniques. P—341 or 441. *Repeated summer*.
Elmore, Roberge

443. Vocational Psychology. (3) Vocational development throughout life; psychological aspects of work; occupational structure and the classifications of occupational literature; theories of vocational choice and their implications for vocational counseling. P or C—341. *Repeated summer*.
Roberge

444. Individual Assessment. (3) The educational and psychological evaluation of individuals by means of tests, clinical observation, and personal data. Development of skills in testing, using the case study method, writing case reports, and formulating

educational procedures. Not open to students who have taken Psychology 451.

Elmore

445. Counseling Practicum and Internship. (3-6) Observation of counseling; case study procedures; analysis of tape-recorded interviews; role-playing; supervised counseling experience. P—341. *Repeated spring and summer.* Elmore, Roberg

446. Counseling Children. (3) Theory and practice of counseling with children in schools and community agencies. Elementary school counseling: models, methods and materials. Counseling children with special emotional, learning, psychological or behavioral concerns. Staff

455. Advanced Counseling Practicum and Internship. (3) Extension of basic practicum and internship experience for advanced counseling and school psychology students. Staff

461. Student Personnel Work and Higher Education. (3) History, philosophy, organization, and functioning of student personnel services in American higher education; college and university structure, governance, and reform; curricular and extracurricular approaches to learning; relevant issues in student life. P—341, 441 or permission of instructor. Elmore

463. Seminar in Counseling. (3) Exploration of special topics in the field of counseling and student personnel work. Elmore

481. Methodology and Research. (3) Advanced study of the methods and materials of a specific discipline (English, social studies, mathematics, science) in the curriculum with special attention directed to the basic research in the discipline. Staff

482. Developmental Counseling Psychology. (3) Theoretical, research, and methodological aspects of an eclectic/developmental framework for counseling. Integration and application of major theories to different settings with particular reference to different age groupings and other special populations. Staff

483. Readings and Research in Education. (1-3) Independent study and research on topics relevant to the student's field of concentration which course may include special reading program in an area not covered by other courses or a special research project. Supervision by faculty members. Hours of credit to be determined prior to registration. Staff

486. Consultation and Program Development in Counseling. (3) Consultation theory and process. Consultation with families, schools, colleges, and community agencies. Models for facilitating change in human systems. Staff

491, 492. Thesis Research. (3, 3). Staff

English

Reynolda Campus

Robert N. Shorter, Chairman

Professors John Archer Carter Jr., Doyle Richard Fosso, Thomas Frank Gossett,
Alonzo W. Kenion, Elizabeth Phillips, Lee Harris Potter, Robert N. Shorter,
Edwin Graves Wilson

Associate Professors Nancy Cotton, Andrew V. Ettin, W. Dillon Johnston,
Robert W. Lovett, William M. Moss, Blanche C. Speer

The courses for which credit may be earned toward the fulfillment of requirements for the M.A. degree offer opportunities for study and research in most of the major areas of both British and American literature and in the English language. The courses for graduates only (numbered above 400) stress independent study and research out of which theses may develop.

Candidates for degrees are required to have a reading knowledge of a modern foreign language. Students can meet this requirement by submitting satisfactory scores on the Graduate School Foreign Language Test in French, German, or Spanish, or by making a satisfactory grade in an advanced reading course in a foreign language taken in residence at the University. With the approval of the department another language may be substituted.

Students seeking graduate teacher certification are required to take six semester hours of courses in the Department of Education in addition to those for the M.A. degree in English.

With approval by the departmental graduate committee, students may take one or two related courses in other departments.

This program began in 1961. Departmental graduate committee: Ettin (chairman), Lovett, Potter.

FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

94. History of the English Language. (3) A survey of the development of English syntax, morphology, and phonology from Old English to the present, with attention to vocabulary growth. Speer

10. Studies in Medieval British Literature. (3) Selected readings from areas such as religious drama, non-dramatic religious literature, romance literature, literary theory, and philosophy. Shorter

5. Chaucer. (3) Emphasis on *The Canterbury Tales* and *Troilus and Criseyde*, with some attention to minor poems. Consideration of literary, social, religious, and philosophical background. Shorter

10. British Drama to 1642. (3) British drama from its beginnings to 1642, exclusive of Shakespeare. Representative cycle plays, moralities, Elizabethan and Jacobean tragedies, comedies, and tragicomedies. Cotton

- 323. Shakespeare.** (3) Thirteen representative plays illustrating Shakespeare's development as a poet and dramatist. Foss
- 325. Studies in British Literature, 1500–1600.** (3) Selected topics, prose, and poetry from the sixteenth and seventeenth centuries, exclusive of drama and Milton. Emphasis on Elizabethan lyrics and Spenser or on Donne and the Metaphysical poets. Foss
- 327. Milton.** (3) The poetry and selected prose of John Milton, with emphasis on *Paradise Lost*. Etti
- 330. British Literature of the Eighteenth Century.** (3) Representative poetry and prose, exclusive of the novel, 1700–1800, drawn from Addison, Steele, Defoe, Swift, Pope, Johnson, Boswell, Goldsmith, and Burns. Consideration of cultural backgrounds and significant literary trends. Kenio
- 332. Satire.** (3) The nature of the satiric form and the satiric spirit as revealed through reading and critical analysis of significant examples, mostly British and American. Kenio
- 335. Eighteenth Century British Fiction.** (3) Primarily the fiction of Defoe, Richardson, Fielding, Smollett, Sterne, and Austen. Love
- 350. British Romantic Poets.** (3) A review of the beginnings of Romanticism in British literature, followed by study of Wordsworth, Coleridge, Byron, Keats, and Shelley; collateral reading in the prose of the period. Wilso
- 353. Nineteenth Century British Fiction.** (3) Representative major works by Dickens, Eliot, Thackeray, Hardy, the Brontës, and others. Carte
- 354. Victorian Poetry.** (3) A study of Tennyson, Browning, Hopkins, and Arnold and another Victorian poet. Johnsto
- 360. Studies in Victorian Literature.** (3) Selected topics, such as development of genres, major texts, cultural influences. Reading in poetry, fiction, autobiography and other prose. Carter, Johnsto
- 362. Blake, Yeats, and Thomas.** (3) Reading and critical analysis of the poetry of Blake, Yeats, and Dylan Thomas; study of the plays of Yeats and his contemporaries in the Irish Renaissance, especially Synge and Lady Gregory. Wilso
- 364. Studies in Literary Criticism.** (3) Consideration of certain figures and schools of thought significant in the history of literary criticism. Pott
- 365. Twentieth Century British Fiction.** (3) A study of Conrad, Lawrence, Joyce, Forster, Woolf, and later British writers, with attention to the social and intellectual backgrounds. Pott
- 367. Twentieth Century Poetry.** (3) Selected American and British poets from 1900 to 1965. Philli
- 368. Studies in Irish Literature.** (3) Critical readings of the works of major Irish writers within the context of the political, social, and literary history of Ireland. Johnsto

- 369. Modern Drama.** (3) Modern drama from its late nineteenth century naturalist beginnings to the contemporary theatre. Cotton
- 372. American Romanticism.** (3) Writers of the mid-nineteenth century, including Emerson, Thoreau, Hawthorne, and Melville. Moss
- 374. Intellectual and Social Movements in American Literature to 1865.** (3) Selected topics such as Puritanism, the Enlightenment, Transcendentalism, and Romanticism. Moss
- 376. American Poetry from 1855 to 1900.** (3) Readings from at least two of the following poets: Whitman, Dickinson, and Melville. Phillips
- 378. Literature of the American South.** (3) A study of Southern literature from its beginnings to the present, with emphasis upon such major writers as Tate, Warren, Faulkner, O'Connor, Welty, and Styron. Moss
- 380. American Fiction from 1865 to 1915.** (3) Such writers as Twain, James, Howells, Crane, Dreiser, Wharton, and Cather. Gossett
- 381. Studies in Black American Literature.** (3) Reading and critical analysis of selected fiction, poetry, drama, and other writing by representative black Americans. McPherson
- 382. Modern American Fiction, 1915 to the Present.** (3) To include such writers as Lewis, Hemingway, Fitzgerald, Faulkner, Steinbeck, Wolfe, Wright, Katherine Anne Porter, Mailer, Bellow, Malamud, Flannery O'Connor, Baldwin, and Styron. Moss, Gossett
- 383, 384. Theory and Practice of Verse Writing.** (3, 3) Emphasis on reading and discussing student poems in terms of craftsmanship and general principles. Staff
- 386. Directed Reading.** (3) A tutorial in an area of study not otherwise provided by the department; granted upon departmental approval of petition presented by a qualified student. Staff
- 389. Use of the Library in Literary Research.** (3) Attention to materials, methods, and bibliography for study in literature. Staff
- 390. Structure of English.** (3) An introduction to the principles and techniques of modern linguistics applied to contemporary American English. Speer

FOR GRADUATE STUDENTS

Not every course listed in this section is given every year, but at least three are offered in the regular academic year, and normally one in each term of the summer session.

- 1. Studies in the Arthurian Legend.** (3) Emphasis on the origin and developments of the Arthurian legend in England and France, with primary focus on Malory's *Le Morte Darthur*. Attention to social and intellectual backgrounds.

Shorter

- 415. Studies in Chaucer.** (3) Emphasis on selected *Canterbury Tales*, *Troilus and Criseyde*, and the longer minor works, with attention to social, critical, and intellectual background. Lectures, reports, discussions, and a critical paper. Shorter
- 421. Studies in Spenser.** (3) Emphasis on *The Faerie Queene*; attention to the minor works; intellectual and critical background. Lectures, discussions, and class papers. Fosse
- 425. Studies in Seventeenth Century British Literature.** (3) Non-dramatic literature of the seventeenth century, exclusive of Milton. Emphasis on selected major writers. Lectures, discussions, and presentation of studies by members of the class. Fosse
- 433. Eighteenth Century British Fiction.** (3) A study of two major British novelists of the eighteenth century. Lectures, reports, critical papers. Authors for study chosen from the following: Defoe, Richardson, Fielding, Smollet, and Austen. Love
- 435. Major Augustans.** (3) A study of some of the principal works of the period 1600–1740, selected from the following writers: Dryden, Addison, Steele, Swift, and Pope. Lectures, reports, discussion, and a critical paper. Kenio
- 443. Nineteenth Century British Fiction.** (3) A study of two major British novelists of the nineteenth century. Lectures, reports, discussions, and a critical paper. Authors for study chosen from the following: Austen, Dickens, Thackeray, Eliot, and Hardy. Carter
- 445. British Poetry of the Nineteenth and Twentieth Centuries.** (3) A study of several British poets chosen from the major Romantics, Tennyson, Browning, Hardy, and Yeats. Wilco
- 455. Studies in American Fiction.** (3) A study of the principal fiction of two major American writers of the nineteenth century. Lectures, seminar reports, and a research paper. Authors for study chosen from the following: Poe, Hawthorne, Melville, Twain, James, and Faulkner. Gosse
- 457. American Poetry.** (3) Studies of the poetry and poetic theory of three major American writers in the nineteenth and twentieth centuries. Writers chosen from the following: Whitman, Dickinson, Frost, Eliot, Stevens, and Williams. Discussion reports, and a critical paper. Philli
- 465. Literary Criticism.** (3) A review of historically significant problems in literary criticism, followed by study of the principal schools of twentieth century critical thought. Lectures, reports, discussions, and a paper of criticism. Pot
- 489. Linguistics in Literature.** (3) Examination of theories of grammar and attitudes toward the English language reflected in the literature of selected periods. Sp
- 491, 492. Thesis Research.** (3, 3) St

History

Reynolda Campus

Richard L. Zuber, Chairman

Professors Richard Chambers Barnett, Cyclone Covey, Balkrishna G. Gokhale, J. Edwin Hendricks Jr., Thomas E. Mullen, Percival Perry, David L. Smiley, Henry Smith Stroupe, Lowell R. Tillett, W. Buck Yearns Jr., Richard L. Zuber
Associate Professors James P. Barefield, Merrill G. Berthrong, David W. Hadley, James G. McDowell, J. Howell Smith, Alan J. Williams

The undergraduate major required for unqualified admission to graduate study in the Department of History must contain at least twenty-four semester hours or equivalent credits (eight courses), including courses in United States and modern European history. The student planning to write a thesis in the South Asian field must have completed introductory courses in Asian history and civilization at the undergraduate level. An applicant should also have a reading knowledge of French, German, Spanish, or another appropriate foreign language at the time of enrollment and cannot be considered for admission unless training in a foreign language is sufficient to indicate that the Graduate School Foreign Language Test could be passed by the end of the first semester. It is suggested that students interested in quantitative historical research take Mathematics 155, *Introduction to Fortran Programming*.

Graduate study is offered in the history of the United States, modern Europe, England, the British Empire, and South Asia. A student's program must include at least one seminar at the 400 level. Research materials are available at the University within the area on North Carolina, the South, American church history, historic preservation, England, Western Europe, the British Empire and Commonwealth, and South Asia.

Although the minimum residence requirement for the M.A. degree is two semesters, students should normally plan to spend a calendar year completing requirements. Some courses are offered in the summer session, enabling the student who wishes to do so to enter in June and receive the M.A. degree one year later. Students desiring to use work taken in the department for graduate teacher certification should consult the Department of Education prior to applying for candidacy.

This program began in 1961. Departmental graduate committee: Yearns (chairman), Barnett, McDowell, Smith, Williams, Zuber.

FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

1. Seminar. (3) Offered by members of the staff on topics of their choice. A paper required. Staff

2. 312. Social and Intellectual History of Modern Europe. (3, 3) Intellectual trends in Western European civilization. Fall, seventeenth and eighteenth centuries; Spring, nineteenth and twentieth centuries. Berthrong

316. France and England in the Twelfth and Thirteenth Centuries. (3) The structure of society, the nature of law, church/state relations, and intellectual developments. P—Permission of instructor. Barefield

319, 320. Germany. (3, 3) Fall, origins of the German nation and the rise of Prussia in a context of particularism; spring, from the Reich of Bismarck to divided Germany. McDowell

321. France: Old Regime and Revolution. (3) The reconstruction of political and social order following the Wars of Religion; the Enlightenment; the collapse of monarchy. William

322. France since the Revolution. (3) The quest for a new internal order and the reaction of France to an era of rapid change, from the fall of Robespierre to the departure of Charles de Gaulle. William

323, 324. England. (3, 3) A political and social survey, with some attention to Continental movements. Fall, to 1603; spring, 1603 to present. Barnett, Hadley

325. Tudor and Early Stuart England. (3) A constitutional and social study of England from 1485 to 1641. Barne

329, 330. Modern England. (3, 3) Political, social, economic, and cultural history of England since 1714. Fall, to 1815; spring, since 1815. Hadley

331, 332. Russia. (3, 3) Primarily political, with some attention to cultural and social developments. Fall, the Russian Empire; spring, the Soviet Union. Tille

333. European Diplomatic History, 1848–1914. (3) Research/discussion seminar with emphasis on topics from the Bismarck era. Mullen

335, 336. Italy. (3, 3) 335: medieval and Renaissance Italy to 1529; 336: 1529 to the present. Barefield

341. Southeast Asia from 1511 to the Present. (3) A survey of history and culture of Southeast Asia under Western colonial systems, with special reference to economic, social, and cultural developments, the rise of nationalism, and the emergence of nation-states. Gokha

342. The Middle East from Suleiman the Magnificent to the Present. (3) Major subjects covered include the rise and fall of the Ottoman Empire, the Arabs and Persians under Ottoman hegemony, the rise of Arab nationalism, and the emergence of the modern Arab states and their role since World War II. Gokha

343. Imperial China. (3) The development of traditional institutions in Chinese society to 1644, with attention to social, cultural, and political factors, emphasizing continuity and resistance to change. Sincla

344. Modern China. (3) The Manchu Dynasty and its response to the Western challenge; the 1911 Revolution; the warlord era and the rise of the Communist Chinese Communist society; the Cultural Revolution. Sincla

345, 346. History and Civilization of South Asia. (3, 3) An introduction to the

history and civilization of South Asia. Emphasis on historical developments in the social, economic, and cultural life. Gokhale

347. India in Western Literatures. (3) An historical survey of images of India in Western literature, with special reference to religious and philosophical ideas, art, polity, society, and culture. Gokhale

348. Modern Japan. (3) Tokugawa era; Meiji Restoration; industrialization and urbanization; relations with the West; World War II; occupation; Japan in the contemporary world. Sinclair

349, 350. East Asia. (3, 3) An introduction to the social, cultural, and political development of China, Japan, and Korea. Fall, to 1600; spring, since 1600. Sinclair

351, 352. Social and Intellectual History of the United States. (3, 3) The relationship between ideas and society. Religion, science, education, architecture, and immigration are among the topics discussed. Zuber

353. Colonial English America, 1582–1774. (3) Determinative episodes, figures, allegiances, apperceptions, and results of the period, organically considered. Covey

354. Revolutionary and Early National America, 1763–1820. (3) The American Revolution, its causes and effects, the Confederation, the Constitution, and the new nation. Hendricks

355. The Westward Movement. (3) The role of the frontier in United States history, 1763–1890. *Usually offered in summer only.* Smiley

356. Jacksonian America, 1820–1850. (3) The United States in the age of Jackson, Clay, Calhoun, and Webster. A biographical approach. Hendricks

357. The Civil War and Reconstruction. (3) The political and military events of the war and the economic, social, and political readjustments which followed. Years

358. The United States from Reconstruction to World War I. (3) National progress and problems during an era of rapid industrialization. Years

359. Twentieth Century America I. (3) The transition of America from World War to the eve of World War II, with special emphasis on the "Roaring Twenties" and the New Deal. Smith

360. Twentieth Century America II. (3) Recent United States developments from Pearl Harbor to the eve of the present. Smith

362. American Constitutional History. (3) Origins of the Constitution, controversies involving the nature of the union, and constitutional readjustments to meet the new American industrialism. Years

363, 364. The South. (3, 3) Geography, population elements, basic institutions, and selected events. Smiley

365. Women in American History. (3) A survey of the roles and activities of women in America, with emphasis upon selected individuals. Smiley

366. Studies in Historic Preservation. (3) An analysis of history museums and

agencies and of the techniques of preserving and interpreting history through artifacts, restorations, and reconstructions. P—Permission of instructor.

Hendrick

367, 368. North Carolina. (3, 3) Selected phases of the development of North Carolina from the Colonial beginnings to the present. Fall, to 1789; spring, since 1789.

Stroup

369. The American Military Experience. (3) A survey of the military ideas and activities of the American people and their armed forces, with emphasis on the relationship between war and society.

Zube

391, 392. Historiography. (3, 3) The principal historians and their writings from ancient times to the present. Fall, European historiography; spring, American historiography.

Perr

398. Individual Study. (3) A project in an area of study not otherwise available in the department; permitted upon departmental approval of petition presented by qualified student.

Sta

399. Directed Reading. (1-3)

Sta

FOR GRADUATE STUDENTS

431. Seminar. (3) Instruction in the methods of historical research and writing. Specialists in American, Asian, and European history discuss areas for research, bibliographical and reference tools, and available source materials for theses in the respective fields. Each student is required to engage in a research project and to write a paper for discussion and criticism by the class and the seminar director.

Sta

438. Studies in European History. (3) The history of selected periods and areas. Conducted chiefly by readings and student reports.

Barne

447. Topics in Modern India. (3) Intensive explorations of select economic, social, and cultural developments in India under British rule. Lectures, readings, and student reports.

Gokha

452. Studies in United States History. (3) The history and bibliography of selected topics. Primarily readings and student reports.

Yearr

463, 464. American Foundations. (6) A survey of the European heritage and the colonial environment which developed into the American culture of the late eighteenth and early nineteenth centuries. A cooperative program of the University and Reynolda House Inc. Lectures provide a continuity of theme; Old Salem and other historic sites provide opportunities for giving history a visual dimension. A research project required. *Summer.*

Covey, Sta

466. Advanced Studies in Historic Preservation. (3) A detailed study of current preservation activities including recent developments in the museum field, preservation law, community preservation, adaptive use, and the economics of preservation. P—366 or its equivalent and permission of instructor.

Hendrick

470. Oral History. (3) Intensive study of select events of recent Piedmont North Carolina history, the preparation of sets of questions for interviews, interviews with participants of those events, and the evaluation of these interviews as historical evidence. Years

481, 482. Directed Reading. (3, 3) A program of extensive reading arranged with a specialist in the department in an area chosen by the student. The reading may range from a broad survey of a field not previously covered by the student to an intensive investigation of a specific topic, but it may not be directly related to the student's thesis material. Staff

491, 492. Thesis Research. (3, 3) Staff

With approval of the instructor and the graduate committee, the following courses may be taken by history students for three hours, 400 level graduate credit:

431. American Art. (3) The survey of American painting from 1600 to 1900. M. Smith

433. American Architecture. (3) A survey of American architecture from 1600 to 1900, with emphasis on the eighteenth and early nineteenth centuries. M. Smith

Mathematics

Reynolda Campus

Marcellus E. Waddill, Chairman

Professors John V. Baxley, Richard D. Carmichael, Ivey C. Gentry,
Fredric T. Howard, J. Gaylord May, W. Graham May, John W. Sawyer,
Ben M. Seelbinder, Marcellus E. Waddill

Associate Professors Elmer K. Hayashi, Ellen Kirkman,
James Kuzmanovich

To obtain an M.A. degree in one year, a graduate student must present evidence of having completed the work required of an undergraduate who majors in mathematics in a fully accredited college or university. Such a major is understood to include at least thirty-three semester hours of mathematics, of which at least eighteen require as prerequisite one year of calculus. Students who are admitted with less than the level of preparation specified should expect to take additional courses at the 300 level and remain in residence for more than one year.

The thirty semester hours required for the master's degree must include at least four courses numbered above 400, in addition to Mathematics 491, 492. An advanced course is required in each of the areas of analysis, algebra, and topology. Normally this requirement is met with the courses 411, 421, and 431.

Because of the important mathematical literature in German, French, and Russian, the student must pass a reading examination in one of these languages near the beginning of graduate study. The examination used is the Graduate School Foreign Language Test. In certain cases the department may prescribe an alternate method of meeting this requirement.

The department has access to a Prime 750 computer for use in teaching and research. Students desiring to use work taken in the department for graduate teacher

certification should consult the Department of Education before applying for candidacy.

This program began in 1961. Departmental graduate committee: Gentry (chairman), Baxley, Carmichael, Howard.

FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

Computer Science

371. Elementary Data Structures. (3) Lecture and laboratory. A course in advanced programming techniques, including the study of stacks, queues, lists, list processing and recursion. P—Computer Science 173 or 175.

372. Data Structures. (3) Lecture and laboratory. A continuation of Computer Science 371, including the study of trees, graphs, sorting, searching and algorithm efficiency. P—Computer Science 371.

Mathematics

311, 312. Advanced Calculus I, II. (3, 3) Limits and continuity in metric spaces, differentiation and Riemann-Stieltjes integration, sequences and series, partial differentiation and functions of real variables, implicit and inverse function theorem. P—113.

317. Complex Analysis. (3) Analytic functions. Cauchy's theorem and its consequences, power series, and residue calculus. P—113.

322. Modern Algebra II. (3) A continuation of modern abstract algebra through the study of additional properties of groups and fields and a thorough treatment of vector spaces. P—221.

323, 324. Matrix Theory. (3, 3) Basic concepts and theorems concerning matrices and real number functions defined on preferred sets of matrices. P—121.

332. Non-Euclidean Geometry. (3) Postulates, definitions, theorems, and models of Lobachevskian and Riemannian geometry.

345, 346. Elementary Theory of Numbers. (3, 3) Properties of integers, congruences, arithmetic functions, primitive roots, sums of squares, magic squares, applications to elementary mathematics, quadratic residues, and arithmetic theory of continued fractions.

348. Combinatorial Analysis. (3) Enumeration techniques, including generating functions, recurrence formulas, the principle of inclusion and exclusion, and Polya theorem.

351. Applied Analysis. (3) Topics which have proven useful in the physical sciences including vector analysis and complex analysis.

352. Partial Differential Equations. (3) The separation of variables technique for the solution of the wave, heat, Laplace, and other partial differential equations, with

he related study of the Fourier transform and the expansion of functions in Fourier, Legendre, and Bessel series.

353. Mathematical Models. (3) Development and application of probabilistic and deterministic models. Emphasis given to constructing models which represent systems in the social, behavioral, and management sciences. P—Mathematics 253 or Management 462.

355. Numerical Analysis. (3) A computer-oriented study of analytical methods in mathematics. Lecture and laboratory. P—112 and 155.

357, 358. Mathematical Statistics. (3, 3) Probability distributions, mathematical expectation, sampling distributions, estimation and testing hypotheses, regression, correlation, and analysis of variance. P—113.

61. Selected Topics. (3) Topics in mathematics which are not considered in regular courses. Content varies.

81. Independent Study. (2) Library and conference work performed on an individual basis. Open only to students with superior records. Six hours per week. —Permission of staff.

FOR GRADUATE STUDENTS

11, 412. Real Analysis. (3, 3) Measure and integration theory, elementary functional analysis, selected advanced topics in analysis. Carmichael

15, 416. Seminar in Analysis. (1, 1) Baxley

18. Topics in Analysis. (3) Selected topics from functional analysis or analytic function theory. Baxley

21, 422. Abstract Algebra. (3, 3) Groups, rings, fields, extensions, Euclidean domains, polynomials, vector spaces, Galois theory. Kuzmanovich, Waddill

23, 424. Seminar on Theory of Matrices. (1, 1) Gentry

25, 426. Seminar in Algebra. (1, 1) Kirkman, Kuzmanovich

31, 432. General Topology. (3, 3) An axiomatic development of topological spaces. Includes continuity, connectedness, compactness, separation, axioms, metric spaces, convergence, embedding and metrization, function and quotient spaces, and complete metric spaces. Graham May

35, 436. Seminar on Topology (1, 1) Gaylord May

37, 438. Seminar on Geometry. (1, 1) Sawyer

45, 446. Seminar on Number Theory. (1, 1) Hayashi, Howard

52. Topics in Applied Mathematics. (3) Topics will vary and may include computational methods in differential equations, optimization methods, approximation techniques, eigenvalue problems. Baxley

458. Topics in Statistics. (3) Topics will vary and may include linear models, nonparametric statistics, stochastic processes. Kirkman

491, 492. Thesis Research. (3, 3) Staff

Medical Genetics

Hawthorne Campus

Harold O. Goodman, Head

Professors Harold O. Goodman, C. Nash Herndon

The Section on Medical Genetics offers work leading to the M.S. degree in medical sciences. The emphasis in both course work and thesis research is on genetics. The thesis topic and thesis research are dependent on the previous training and interests of the student. Candidates for graduate degrees are required to have a reading knowledge of one foreign language or special skill in computer programming or statistics, depending on needs and background.

Study leading to the M.S. in medical sciences began in 1959.

401. Human Genetics. (2) Lectures in methodology and principles of human genetics. Topics considered include tests of genetic hypotheses, population genetics evolutionary changes in human populations, twin study methods, and chromosomal aberrations. P—One course in genetics. *Offered in odd-numbered years.*

Herndon, Goodman

402. Medical Genetics Seminar. (1) Weekly seminars are concerned with both classical and current research in medical genetics. Some seminars are presented by students. P—Genetics and departmental approval. *Offered in even-numbered years.*

Herndon, Goodman

404, 405. Advanced Topics in Human Genetics. (Credit to be arranged, 1-4) Covers areas of current research interest as well as classical studies not covered in existing courses. Courses include independent study, assigned reading, and discussions. P—General biochemistry and permission of instructor. Goodman

409, 410. Research. By special arrangement qualified students may participate in departmental research in progress or may investigate an independent problem under staff supervision.

Microbiology and Immunology

Hawthorne Campus

Charles E. McCall, Acting Chairman

Professors Henry Drexler, Louis S. Kucera, Quentin N. Myrvik,

Stephen H. Richardson

Associate Professors Donald L. Evans, Eugene R. Heise, Arnold S. Kreger,

Samuel H. Love

Assistant Professors Douglas S. Lyles, Manuel J. Ricardo, Jr., Beverly Anne Weeks

The graduate program of the department is designed to prepare students for careers of teaching and investigation in the field of microbiology and immunology



Associate Dean Harold O. Goodman and graduate students Eric Napper (left) and Barbara Westbrook working with an amino acid analyzer

The programs of study are designed to satisfy the needs of the individual student. The department offers programs leading to the M.S. and Ph.D. degrees.

The M.S. was first offered in 1941, the Ph.D. in 1964.

302. Medical Microbiology. (6) Host/parasite relationships of medical importance and the principles of infection and immunity studied and discussed. The course provides the student with the fundamentals of microbiology needed for continued study of the mechanisms, diagnosis, treatment, and prevention of infectious disease. A study is made of fungi, bacteria, viruses, rickettsiae, and animal parasites. P—Organic chemistry (two semesters) Kreger, Sta

304. Introduction to Immunology. (3) A lecture/laboratory course dealing with fundamental concepts of immune responses. The development of cellular and humoral immune responses and their regulation are considered in relation to infectious disease, allergy, tissue transplantation, neoplasia, autoimmune disease, and immuno-deficiency. Also considered are the properties of antigens and immune globulins, immunologic specificity, and methods of monitoring immune response. The laboratory is designed to provide practical experience with basic immunology techniques. (2-2) McCall, Sta

401. Basic Animal Virology. (4) A lecture/laboratory course which deals with basic aspects of virus structure and biologic functions, principles of virus replication, antiviral agents, genetics of viruses, and consequences of virus/cell interactions. The laboratory sessions are designed to give the student experience in fundamental techniques involving tissue culture, virus growth kinetics, virus assay, and macromolecular synthesis. (2-4) P—Permission of instructors. Lyles, Kucera

402. Advanced Topics in Virology. (3) A lecture/conference course designed to provide a concentrated analysis of current published research knowledge, particularly as related to oncogenic viruses. Course content changes with recent advances in knowledge and student background and interests. In regard to course content, emphasis placed on experimental design, methodology, interpretation of data, and relevance to an understanding of regulation of viral gene expression, virus/host cell interaction, and oncogenesis. Presentations and discussions demand active student participation. P—401 or permission of instructor. Kucera, Sta

403. Pathogenesis of Infectious Diseases. (3) A comprehensive course dealing with microorganisms associated with infectious diseases and with host/parasite interactions. The mechanisms by which microorganisms circumvent host defenses and produce disease in man emphasized. Areas discussed include incidence and geographic distribution of the disease, epidemiologic factors and principles, tissue tropism of the infectious agent, and the roles of microbial products in eliciting histological, biochemical, and physiological pathology. P—302 and biochemistry or equivalent. *Offered in odd-numbered years.* Kreger, Sta

404. General Microbiology. (6) A comprehensive course dealing with microorganisms not normally associated with diseases. The taxonomy, cytology, genetics, physiology, and ecology of these organisms are emphasized. P—Organic chemistry (two semesters); C—Biochemistry. *Offered in fall.* Richardson, Lov

06. Microbial Genetics. (4) The structure, inheritance, phenotypic expression, and mutation of deoxyribonucleic acid are discussed, with special emphasis on the role of microorganisms as a tool in elucidating these characteristics. Specific genetic mechanisms found in bacteriophage and bacteria are examined in detail. In addition to the normal lecture program, each student presents a seminar on a particular aspect of microbial genetics. P—301 or 302 or equivalent. *Offered in even-numbered years.* Drexler

07. Ultrastructure of Microbial and Mammalian Cells. (4) Acquaints the student with the various techniques involved in the preparation of biological specimens for study with the electron microscope. The student gains experience in the operation of the electron microscope and observes demonstrations of cytochemical techniques and the application of antigen/antibody markers. (2-4) P—Permission of instructor. Leake

08. Biology of Neoplasia. (3) A multidisciplinary lecture/conference course dealing with the cell biology, molecular biology, and therapy of neoplasia. Emphasis on presentation of experimental research models and survey of current literature pertaining to neoplasia. P—Biology or microbiology, immunology, biochemistry desirable. *Offered in odd-numbered years.* Sethi, Kucera

09. Introduction to Clinical Immunology. (4) A lecture/laboratory course concerned with the clinical applications of immunology. Topics include histocompatibility, mechanisms of acquired immunity to infectious diseases, mechanisms of hypersensitivity to induced disease, autoimmune diseases, immuno-deficiency syndromes, and tumor/host relationships. (3-2) P—304 or permission of instructor. *Offered in even-numbered years.* Heise, Staff

11. Cellular Basis of Immunology. (4) An extensive lecture/discussion course considering the cellular basis for immune responses. Intended for advanced students of immunology, this course emphasizes new information and experimental design from the current literature. P—304 or equivalent. *Offered in odd-numbered years.* Ricardo, Staff

13, 414. Microbiological Techniques. (1-4) An advanced laboratory course in the theory and practical applications of clinical microbiology. Intensive study of the procedures and techniques used in the diagnosis and treatment of infectious agents as provided in the lab. Emphasis on problem solving and laboratory correlation with clinical disease. P—Biology 326 or Microbiology 301 and 302. Wasilauskas

15, 416. Seminar in Microbiology. (1, 1) Current research problems and reviews of the literature presented weekly by graduate students.

17, 418. Seminar in Immunology. (1, 1) Current research problems and reviews of the literature presented weekly by graduate students.

19, 420. Research in Microbiology. (Credit to be arranged.)

19. Research in Microbiology. (Credit to be arranged.) Research training offered graduate students with faculty advisers in a tutorial system. *Summer.*

21, 422. Teacher Training. (No credit) Graduate students assist in preparation for

the medical microbiology course except during the semester they are taking it. Advanced graduate students teach laboratory sections in medical microbiology a minimum of three semesters and are expected to give lectures in other courses offered by the department. (Students receiving University funds are assigned additional teaching duties.) P—Advanced standing.

Diagnostic Clinical Microbiology. See Pathology 418.

Neuropsychology

Hawthorne Campus

Frank B. Wood, Head

Associate Professor Frank B. Wood

401. Neuropsychology and Learning Disabilities. (3) Language, perceptual/motor memory, attentional, and emotional deficits arising from neuropsychological factors are studied in the context of brain functioning and information processing and applied to learning disabilities in children, in both theoretical and practical terms. P—Permission of instructor. (Same course as Psychology 467.) Woo

453. Psychophysiology of Disease Processes. (3) Physiological responsivity to behavioral events is reviewed in the current research literature. Disease states—especially those involving the cardiovascular, muscle, and central nervous systems—and biofeedback and other therapeutic technologies are especially emphasized. P—Permission of instructor and of student's major department. Woo

482. Readings and Research in Psychology. (1, 2, or 3) Allows the graduate student, working under the supervision of a faculty member, to pursue and receive credit for a special reading project in an area not covered by regular courses or a special research project not related to the master's thesis. Supervising faculty member and hours credit for which enrolled determined by graduate committee prior to registration. *Fall and spring.* (Same course as Psychology 482.) Woo

Pathology

Hawthorne Campus

Robert W. Prichard, Chairman

Professors Robert W. Prichard, Richard W. St. Clair

Associate Professors Jon C. Lewis, Zakariya K. Shihabi, Alberto Trillo,

Benedict L. Wasilauskas

Assistant Professors Jean N. Angelo, John W. Hartz, Mary Ruth McMahan

This department, in conjunction with the Department of Comparative Medicine, offers a program in comparative and experimental pathology leading to the M.S. and Ph.D. degrees. (See Interdisciplinary Program.)

402. Fundamentals of Pathology. (3) An introduction to the principles of diseases with special emphasis on mechanisms of cellular and tissue responses. The first portion of the course deals with methods of study; cellular pathobiology and mechanisms of inflammatory response; and genetic, immune, and infectious disorders. The second portion is concerned with disorders of cellular differentiation and

growth, disorders of circulation, metabolic disorders, and aging. Exposure to human gross pathology is provided during the course. P—Histology or permission of instructor. *Offered in the fall.* Trillo, Staff

10. Pathologic Biochemistry. (2) A lecture course designed to present concepts of biochemical changes associated with disease processes. It is meant to provide the student with examples of various ways in which biochemical changes can cause disease or result from disease. The course is not designed as a survey of all the biochemical disorders that have been described; emphasis is on the intensive discussion of examples of different mechanisms of biochemical alterations associated with disease. Examples of biochemical disorders affecting the following systems are considered: disorders of protein, amino acid, and carbohydrate metabolism; endocrine disorders; lipid storage diseases; disorders of metal, porphyrin, heme metabolism and hemostasis; diseases of muscle and connective tissue. P—General biochemistry or 391 or equivalent. *Offered in even-numbered years.* St. Clair, McMahan, Lewis

15, 416. Advanced Topics in Pathology. (Credit to be arranged, 1-5) An advanced lecture and student participation course dealing with areas of new knowledge in pathology. Course content may change with recent advances in knowledge. Four semesters may be taken for credit. P—General pathology, Comparative Medicine 401, or permission of instructor. Offered jointly with the Department of Comparative Medicine. Staff

17. Pathobiology of Atherosclerosis. (4) A lecture course exploring intensively the pathogenetic mechanisms which underlie this most prevalent human disease. Broad areas studied include human atherosclerosis as a disease process (natural history and factors affecting extent and severity of atherosclerosis in man), approaches to the study of pathogenesis in man (animal models, homeostasis of serum lipid levels, arterial metabolism, clotting mechanisms and thrombosis, experimental myocardial infarction), and the scientific basis for therapy in atherosclerosis (surgery, sterol synthesis inhibitors, chelating agents). P—General biochemistry, general pathology, or equivalent. Clarkson, Staff

18. Diagnostic Clinical Microbiology. (2) A didactic course designed to provide the student with an understanding of basic concepts of infectious disease and how they relate to clinical microbiology. Emphasis is on the role of the clinical microbiologist in the proper collection of specimens, interpretation of laboratory results, and selection of appropriate antimicrobial agents. P—Microbiology 302 or equivalent. *Offered in odd-numbered years.* Wasilauskas

27, 428. Comparative and Experimental Pathology Seminar. (1, 1) Seminars on topics of current interest are offered weekly by graduate students, staff, and visiting lecturers. Staff

29, 430. Research. Research opportunities are available in comparative and experimental pathology projects conducted in the Department of Comparative Medicine or in the Department of Pathology or jointly.

Microbiological Techniques. See Microbiology 413, 414.

Staff

Physical Education

Reynolda Campus

William L. Hottinger, Chairman

Professors William L. Hottinger, Paul M. Ribisl

Assistant Professors Sarah Hutslar, Steve Messier, W. Jack Rejeski

The Department of Physical Education offers a 15 month program leading to the Master of Arts degree. This program offers a specialization in the area of exercise and sport science and is designed for those who are interested in careers in exercise and sport science research, preventive and rehabilitative programs and/or further graduate study.

Candidates for the Exercise and Sport Science Program are not required to have an undergraduate major or minor in physical education; however, an undergraduate concentration in the sciences is preferred. Candidates for the program generally pursue research careers in exercise science laboratories (exercise physiology, biomechanics or rehabilitation) and/or direct programs of exercise training or rehabilitation (YMCAs, industrial fitness programs and cardiac rehabilitation). The prerequisites for this program include course work in human physiology, physiology of exercise and kinesiology. These courses should be completed before admission to the program, but with departmental approval they may be completed during the regular course of study. None of the prerequisites may apply toward the graduate degree. All students in the program are required to take the following courses: 411, 421, 433, 463, 464, 465, 466, 480 and 491-92. This is a 15 month program for thirty hours of credit; candidates are expected to arrive on campus for the summer session *before* the regular academic year and to remain through the summer session *after* the academic year.

An opportunity for certification as Exercise Test Technologist through the American College of Sports Medicine is made available through this program each summer. Candidates are encouraged to complete this certification in their first summer session. In addition, the Departments of Medicine and Physical Education have joined in a cooperative effort to sponsor a cardiac rehabilitation program for patients in the community with documented coronary disease. Each graduate student has the opportunity for an internship in this program in the dual capacities of exercise technician and exercise leader. This internship also includes a similar experience with the preventive programs for adult men and women. The candidates for the program are also expected to teach one departmental course each semester in the foundations of health and physical activity in order to fulfill the special skill requirement for graduation.

The Department of Physical education began offering graduate study in 1967. Departmental graduate committee: Ribisl (chairman), Hottinger, Hutslar, Messier, Rejeski.

FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

360. Evaluation and Measurement in Health and Physical Education. (3) Present

measurement techniques and beginning statistical procedures, to determine pupil status in established standards of health and physical education which reflect prevailing educational philosophy. Rejeski

363. Personal and Community Health and Safety Education. (3) A study of personal and community health needs of school age children and methods of administering physical education programs for special students. Hutslar

370. Biomechanics of Human Movement. (3) The study of the internal and external forces which act on the human body and the effects produced by these forces. Principles of physics will be applied to specific sport skills. P—352. Messier

382. Independent Study in Health and Physical Education. (1-3) Library conferences and laboratory research performed on an individual basis. Staff

FOR GRADUATE STUDENTS

415. Qualitative Research Design. (3) A study of the various types of research relevant to physical education and sport. While attention is given to topics such as statistical treatment of data, the primary emphasis involves discussion concerning threats to internal and external validity for experimental and quasi-experimental designs. In conjunction with a sound methodological approach, practical experiences are provided in the preparation and presentation of thesis proposals. Rejeski

421. Data Analysis and Interpretation. (3) The application of basic statistical techniques in the analysis and interpretation of data in scientific research. Topics include descriptive statistics, simple linear and multiple correlation/regression analysis, t-tests, analysis of variance and co-variance, and non-parametric statistics. Ribisl

433. The Psychology of Sport and Physical Activity. (3) A comprehensive analysis of psychological issues pertaining to sport and physical activity, including a discussion of the major approach within psychology related to a variety of content areas relevant to sport such as motivation, stress, and aggression. Consideration is given to the meaning and future role of sport in American society. Rejeski

463. Advanced Biomechanics. (3) An in-depth study of the mechanical principles which influence human movement. Topics include the study of kinetics, kinematics, cinematography, electromyography, and electrogoniometry. P—anatomy, kinesiology, physics or permission of instructor. *Summer only.* Messier

464. Nutrition and Weight Control. (3) A study of the problem of obesity and malnourishment in modern society and analysis of the causative factors. Current research findings on the influence of genetics, eating behavior, and activity patterns upon nutrition and weight control examined. Laboratory experiences include analysis of diet, assessment of body composition, methods of diet prescription, and behavioral modification as means of intervention in obesity and coronary heart disease. Ellis, Rejeski, Ribisl

465. Graded Exercise Testing and Evaluation of Work Capacity. (3) The study of the rationale for the use of graded exercise testing in the evaluation of functional

work capacity. Lectures include the analysis of different modes of evaluation: tread mill, bicycle ergometer, arm ergometer, and field testing, with the application of the results in the evaluation of normal and cardiac patients. Laboratory experience include the use of electrocardiogram ergometers and metabolic analysers in the assessment of functional capacity. *Summer only.* Ribis

466. Principles of Exercise Prescription. (3) The study of basic physiological principles in the prescription of exercise for individuals of differing age and health status. Emphasis on the design of safe and effective programs of physical activity, utilizing sound principles of exercise prescription in conjunction with pertinent information on medical history and functional work capacity. Ribis

480. Advanced Topics in Exercise and Sport Science. (3) This course is divided into two or more topic areas to allow an in-depth treatment of selected topics which are not a regular part of required course work. Topics may include study from the following broad areas of concentration: administration of programs, anatomy, biomechanics/kinesiology, computer analysis, physiology of exercise, and psychology of physical activity. Seminar and/or laboratory approach. Messier, Rejeski, Ribis

482. Independent Study in Physical Education. (1-3) Literature and/or laboratory research performed on an individual basis under the supervision of a faculty member. Stat

483, 484. Seminar in Physical Education. (0) Designed to bring all graduate students and graduate faculty together on a regular basis to discuss research proposals, research designs and studies, results of research, and current topics in related areas of research. Graduate students and faculty are expected to present research proposals and results for critique and discussion. Ribis

491, 492. Thesis Research (3, 3) Stat

Physics

Reynolda Campus

George P. Williams, Chairman

Professors Robert W. Brehme, Ysbrand Haven, Howard W. Shields,

George P. Williams Jr.

Associate Professor William C. Kerr

Assistant Professor George Eric Matthews

The Department of Physics strives to provide the professional opportunities usually associated with large research universities while maintaining the atmosphere of a small liberal arts university with an ideal faculty/student ratio. Graduate work leading to the M.S. degree is offered in a program designed to meet the needs of students with various professional goals. The favorable faculty/student ratio satisfies students who want a more personal type of introductory graduate study before entering a Ph.D. program elsewhere. There is also a program to meet the requirements of students who seek the M.S. degree as an ultimate academic goal before going on to teaching or scientific industrial work. The flexibility of the program

allows students with deficiencies in academic background to obtain sufficient preparation to qualify for admission to graduate schools at larger universities.

The entering student is expected to have a sound knowledge of undergraduate mechanics, electricity and magnetism, thermodynamics, and atomic and nuclear physics. Provision is made to allow deficiencies to be remedied. The course of study for each student is planned in conference with the graduate adviser after evaluation of academic background and experience.

The student's course of study must include Physics 411, 412, and 441, as well as participation in departmental seminars. These seminars, in fields of special interest, are regularly scheduled and are often conducted by outside speakers. In addition to satisfying the residence and course requirements, the student must be admitted to candidacy, complete an acceptable thesis under faculty supervision, and pass an oral examination in its defense. Although a full-time student with no deficiencies may complete the degree requirements in one year and one summer, a student who serves as an assistant ordinarily takes two years to complete the degree.

A Wake Forest undergraduate may essentially complete the requirements in one year even as a teaching assistant by following the schedule outlined in the five year B.A./M.S. program (see College bulletin).

Candidates for degrees are expected to meet the foreign language and special skills requirement by submitting satisfactory scores on the French or German Graduate School Foreign Language Test. In certain cases with departmental approval, another skill, typically computer programming, may be substituted.

The graduate faculty of the Department of Physics is engaged in research in theoretical physics and experimental solid state physics (including biophysical applications). Well equipped laboratories are available for the experimental programs. Additional auxiliary instrumentation includes an X-ray diffraction spectrometer, an electron-spin resonance spectrometer, and a mass spectrometer. Computer facilities include a 2114 Hewlett-Packard computer with a plotter and a curve-fitting oscilloscope, a Hewlett-Packard 3000, and terminal access to the IBM 370/165 installation at the North Carolina Research Triangle.

The program began in 1961. Departmental graduate committee: Williams (chairman) and all staff.

FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

11. Classical Mechanics. (3) A senior-level treatment of analytic classical mechanics.

12. Electromagnetic Theory. (3) A senior-level treatment of classical electromagnetic theory.

31, 332. Acoustics I, II. (3, 3) A study of the fundamental principles and applications of the generation, transmission, and reception of sound and its interaction with various media.

43, 344. Modern Physics. (3, 3) Application of the elementary principles of quantum mechanics to atomic and molecular physics.



Audrey Rudd, graduate student in physiology, performs renal surgery on a rat

345, 346. Modern Physics Laboratory. (1, 1) The laboratory associated with Physics 343, 344.

351. Thermodynamics and Statistical Mechanics. (3) A study of the laws of thermodynamics and the kinetic theory of molecular motion. *Offered in the spring of odd-numbered years.*

352. Physical Optics and Spectra. (4) A study of physical optics and the quantum treatment of spectra. *Offered in the fall of even-numbered years.*

381, 382. Research. (3, 3) Library, conference, and laboratory work performed on an individual basis.

FOR GRADUATE STUDENTS

411. Classical Mechanics. (3) A study of variational principles and LeGrange's Equations, the rigid body equations of motion, the Hamilton equations of motion and canonical transformations, Hamilton-Jacobi theory, and applications to continuous systems and fields.

Brehme, Kerr

412. Electromagnetism. (3) A study of Maxwell's Equations, boundary value problems for the electromagnetic field, and radiation; the ponderomotive equation for the charged particle.

Brehme, Kerr

441, 442. Quantum Mechanics. (3, 3) The study of the foundations of modern quantum theory, with an emphasis on the meaning of the wave equation, operators, eigenfunctions, eigenvalues, commutators, matrix mechanics, spin, and scattering.

Kerr

452. Solid State Physics. (3) An introductory course including the structure of perfect crystalline solids, their thermal electronic properties, the free electron and band theory of metals, imperfect crystals, transport properties, and semiconductors.

Haven, Matthews, Williams

455. Magnetic Properties of Solids. (2) Diamagnetism, paramagnetism, and ferromagnetism treated, with a special emphasis on application of nuclear and spin resonance techniques.

Shields

456. Seminar on Defects in the Solid State. (2) The generation and interactions of point and line defects such as color centers, vacancies, and dislocations treated.

Haven, Matthews, Williams

470. Statistical Mechanics. (3) An introduction to probability theory and to the physics of systems containing large numbers of particles from the classical as well as the quantum point of view.

Haven

480. Theory of General Relativity. (3) A study of the covariant formulation of physical laws in mechanics and electromagnetism.

Brehme

485. Topics in Theoretical Physics. (3) Selected topics of current interest in theoretical physics not included in other courses.

Brehme, Kerr

491, 492. Thesis Research. (3, 3)

Staff

Physiology and Pharmacology

Hawthorne Campus

Alvin Brodish, Chairman

Professors Alvin Brodish, Vardaman M. Buckalew Jr.,

Ivan W. F. Davidson, Phillip M. Hutchins, N. Sheldon Skinner Jr.

Associate Professors David A. Blizzard, Samuel A. Deadwyler,

John S. Kaufmann, Melvin Levitt,

Maw-Shung Liu, Jack W. Strandhoy

Assistant Professors Claud E. Dunlap III, J. Charles Eldridge,

Philip W. Landfield, John R. Lymangrover, Mariana Morris,

Darwin W. Peterson, James C. Rose, David K. Sundberg

The Department of Physiology and Pharmacology offers separate degree programs in both disciplines. The graduate programs provide advanced courses and seminars in physiology and pharmacology for students who hold a B.A., B.S., or higher degree and who seek a Ph.D. degree with intent to pursue an academic or research career. Graduate study leading primarily toward the M.S. degree is available only to those who hold the M.D. or D.V.M. degree, or to medical students who have completed two years of the medical curriculum. Preference for admission is given to students with more complete preparation.

The program of study is individualized to meet student needs. Students are expected to obtain a broad background in physiology and pharmacology and in related sciences by taking introductory courses. Through selected advanced courses and seminars the student is offered the opportunity of exploring topics intensively.

After acquiring basic knowledge of physiology and pharmacology and developing fundamental skills and techniques of investigation, a student embarks on an area of research which is the basis of a thesis. The research program is guided by the adviser and a departmental thesis committee.

Current research interests of the departmental staff are mainly in the areas of physiology and pharmacology of the cardiovascular, renal, endocrine, and nervous systems.

The M.S. degree has been offered since 1941, the Ph.D. since 1962.

CORE COURSES IN PHYSIOLOGY AND PHARMACOLOGY

301. Medical Pharmacology. (8) This portion of the interdisciplinary course *Introduction to Medicine* presents an analysis of the effects of drug groups on the physiological and biochemical functions of the human. (See Interdisciplinary Courses.) P—392.

Brodish, Staff

392. Medical Physiology. (7) The program in physiology is intended to provide students with a knowledge and understanding of the function of the major systems of the body and how these systems are coordinated and regulated. Lectures, laboratories, and conferences emphasize the major physiological principles and concepts required to understand organ system function as it relates to medicine. After initial

introduction to basic cellular and membrane function, systematic analysis of cardiovascular, respiratory, digestive, and renal function is followed by analysis of the role of the regulatory and integrative endocrine and nervous systems. P—Biochemistry 391. Brodish, Staff

393. Abnormal Physiology. (4) This portion of the interdisciplinary course *Introduction to Medicine* includes abnormal function of the organ systems as seen in diseased states. (See Interdisciplinary Courses.) P—392. Brodish, Staff

481, 482. Advanced Topics. (1-6) An advanced lecture and conference course which considers various topics of current research interest and concepts under rapid development. Areas of interest within the department are covered on a rotating basis. Additional topics can be offered by announcement. *Offered in 1982-83:*

—*Cardiovascular.* Topics under current investigation or recent advances in areas not covered in the regular seminar schedule or in the regularly planned elective courses. Students give reviews and discussions of papers presented at scientific meetings which they have attended. P—392. Hutchins

—*Renal, Endocrine, Neural, Cardiovascular.* Rotating topic coverage on physiologic and pharmacologic topics supplemented with lectures by visiting scientists. P—Permission of instructor. Brodish, Staff

495, 496. Seminar. (0, 0) Departmental seminars are presented by graduate students and staff. They provide coverage of subjects not included in the other graduate courses and serve as a research forum for presentation of research proposals, work in progress, and completed work by staff and by post- and pre-doctoral trainees. Visiting scientists are scheduled at regular intervals. Staff

ADVANCED COURSES IN PHYSIOLOGY

395. Pathophysiology of Hypertension. (1) A lecture course presenting the basic pathophysiological mechanisms of hypertension. A portion is devoted to intensive analysis of topics of current interest in hypertension research. P—Permission of instructor. *Summer.* Hutchins, Staff

415. Sensory Neurobiology. (3) (1 hour major credit allowed for physiology students.) (See Interdisciplinary Courses.)

431. Cardiac Physiology and Pathophysiology. (3) Lectures and discussions of normal and abnormal cardiac physiology at the cellular, isolated muscle, and organ levels. P—392. Peterson, Staff

432. Vascular Physiology and Pathophysiology. (3) Lectures and discussions of normal and abnormal vascular physiology in the macro- and micro-circulation. P—392. Hutchins, Staff

442. Endocrinology. (2) Recent advances in endocrinology, with emphasis on endocrine regulatory and controlling mechanisms, hormonal interrelationships, and mechanisms of hormonal action at the cellular level. P—392. Brodish, Staff

461. Integrative Neurophysiology. (2) Special topics in neurobiology, treated in the manner of seminars. These include sensory, motor, associative, and arousal functions of the vertebrate nervous system. P—392 or permission of instructor. Levitt

463. Nerve Cell Physiology and Plasticity. (2 or 3) Consideration of basic neurobiological events related to neurone function. Emphasis will be given to topics dealing with morphological, chemical, and physiological plasticity at the synaptic level in various mammalian neural systems. Seminar arrangement includes student presentation of research papers that can serve as a background for continued graduate work in these areas. P—392. Deadwyler

465. Metabolism in Health and Disease. (2) Lectures and discussions of cellular metabolism as correlated with physiological functions of various tissues and organs. Special emphasis on the physiological mechanisms that control metabolic adaptations of liver, adipose tissue, skeletal muscle, and heart during exercise, ischemia, circulatory shock, varying nutritional states, and diabetes mellitus. P—Biochemistry 391. general biochemistry, or equivalent. Liu

467. Physiology of Aging. (2) Seminar on the physiology of aging. Presentations on current topics relevant to age-dependent changes in various organ systems and theories of aging. P—392. Landfield

471. Renal Function and Electrolyte Balance. (2) Recent advances and experimental approaches to the study of renal physiology, with emphasis on the research literature. P—392. Buckalew

491. Research Methods: Medical Electronics. (2) Discussions and demonstrations covering the basic principles of electrical circuits, electron vacuum tubes, semiconductor devices, and electronic equipment commonly used in physiological research. Hutchins

494. Research Methods: Physiology. (2) Discussions, demonstrations, and practical laboratory experience covering the uses and limitations of the more commonly used research equipment and techniques in the areas of physiology. P—B.S. degree. Staff

497, 498. Research. Opportunities are available for collaborative or independent research on physiological problems, including research in preparation for the thesis. Staff

ADVANCED COURSES IN PHARMACOLOGY

400. Advanced Pharmacology. (4) A course of lecture/discussions organized to meet the needs of individual students and to correct deficiencies. Possible topics include molecular pharmacology, drug metabolism, drug action and enzyme induction, cardiovascular, endocrinological, and neurological pharmacology, biologically active polypeptides, and pharmacology of electrolyte balance and of renal function. C—301. Davidson, Staff

402. Cardiovascular Pharmacology. (2) Readings and discussions center around recent developments in drug groups affecting the heart and circulation, with particular emphasis on the experimental approach. P—301 and Physiology 392. Davidson, Staff

404. Endocrinological Pharmacology. (2) A course of lectures and seminars examining the concepts of pharmacological actions and the use of natural and synthetic hormones and drugs with hormonal action. P—301 and Physiology 392.

Davidson, Eldridge

406. Neuropsycharmacology. (2) Readings and discussions concerned with the major classes of drugs acting primarily on the central nervous system. Emphasis on research in this area and the methods used. P—301.

Dunlap

408. Biochemical Pharmacology. (3) A series of lectures, discussions, and laboratories integrating the topics of drug metabolism and pharmacodynamics, pharmacogenetics, molecular pharmacology, and biochemical toxicology. Designed to give students in pharmacology and other disciplines an intensive understanding of the action of drugs at a cellular level.

Dunlap

411. Pharmacology of Electrolyte Balance and Renal Function. (2) Reading of original papers, monographs, reviews, and discussions acquaints the student with the use of drugs and hormonal substances which affect the renal control of electrolyte and water balance. Emphasis on the experimental approach and the mechanism of action. P—Physiology 392.

Strandhoy

413. Research Methods in Pharmacology. (3) Discussions, demonstrations, and practical laboratory experience covering the uses and limitations of some commonly used techniques and procedures in pharmacology.

Staff

414. Applied Pharmacology. (4) An introduction to the application of pharmacologic principles in man; intensive study of how appropriate selection and evaluation of methods used to assess drug absorption, distribution, disposition, therapeutic efficacy, and side effects in man are made. Laboratory is comprised of conferences, independent library research, and ward experiences relating to critical evaluation of actions, interactions, and adverse reactions of drugs in clinical cases. Faculty from clinical departments discuss cases in their areas of expertise. P—Medical pharmacology or equivalent.

Kaufmann

423, 424. Research. (Credit to be arranged) Current areas of investigation available are cardiovascular and renal pharmacology, endocrinology, chemical pharmacology, drug metabolism, and neuropsycharmacology.

Staff

Psychology

Reynolda Campus

John E. Williams, Chairman

Professors Robert C. Beck, Robert H. Dufort, Charles L. Richman,

John E. Williams

Associate Professors David W. Catron, Philippe R. Falkenberg, David Allen Hills

Assistant Professors Deborah L. Best, Cecilia Solano

Adjunct Assistant Professor Frank B. Wood

Lecturer Brian M. Austin

The Department of Psychology offers graduate work leading to a research-oriented general master's degree. The general M.A. degree is defined as one which

emphasizes the scientific, theoretical, and research bases common to all areas of psychology and which exposes students to a variety of both pure science (e.g. learning, motivation, perception, personality, statistics) and applied science (e.g. testing, behavior modification, clinical psychology) content areas.

The program is designed for capable students who (1) expect to continue to the Ph.D. degree but wish to begin graduate work in a department where they receive a high degree of individual attention from the faculty, (2) do not have adequate background for direct entrance into a Ph.D. program because they are deficient in either the number or kind of undergraduate psychology courses taken and wish to complete their undergraduate preparation as they begin graduate work, or (3) wish to terminate graduate work with the master's degree.

The program is not specifically designed to train students to be master's level clinical or counseling psychologists. Students with strong interests in these areas should recognize when they apply that in this program they will master the general field of psychology, including research methods and theory, prior either to working at the M.A. level (graduates of this program have obtained positions in school systems, mental health clinics, colleges, state hospitals, and research settings) or proceeding to specialization at the Ph.D. level. Students who wish to receive specialized training as master's level clinicians should apply to other schools which offer such programs, and students who wish to be trained specifically as master's level counselors should apply either to other schools or to the counseling program in the Department of Education. Potential applicants are asked to consider carefully their interest in the above listed professional options before they apply to the psychology program.

The applicant is expected to have an undergraduate major in psychology at an accredited institution. Such a major includes courses in experimental psychology, statistics, and history and systems of psychology, with a well rounded selection of other psychology courses. Students who are judged to be deficient in these aspects are required to remedy such deficiencies after entering the Graduate School. It is advisable for the applicant to have a substantial background in other laboratory sciences, mathematics, and philosophy, in addition to courses in psychology.

The department has unusually good facilities and library materials for research. The areas in which research is currently being conducted include learning, motivation, perception, personality, cognitive processes, social and child-developmental psychology, and neuropsychology. In addition to the departmental facilities, the University has a computer center for teaching and research.

Though it is possible to obtain the master's degree in one calendar year, most students take two academic years to complete the program. Students who hold assistantships are required to spend two years in residence. In addition to satisfying the University requirements for the degree, all graduate students must write a major research paper and pass a departmental qualifying examination. This examination serves as the department's special skills requirement.

The M.A. degree has been offered since 1964. Departmental graduate committee Dufort (chairman), Beck, Richman, Solano, Williams (ex officio).

FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

- 313. History and Systems of Psychology.** (3) The development of psychological thought and research from ancient Greece to present trends, with emphasis on intensive examination of original sources. P—211 or permission of instructor.
- 320. Physiological Psychology.** (3) Neurophysiological and neuroanatomical explanations of behavior. P—211.
- 323. Animal Behavior.** (3) A survey of laboratory and field research on animal behavior. P—Permission of instructor.
- 326. Learning Theory and Research.** (3) Theoretical and experimental issues in the psychology of learning. P—211.
- 329. Perception.** (3) Survey of theory and research findings on various sensory systems (vision, hearing, touch, taste). P—211.
- 333. Fundamentals of Human Motivation.** (3) Description and analysis of some fundamental motivational phenomena, with special reference to human problems. Includes reward and punishment, conflict, anxiety, affection, needs for achievement and power, aggression, creativity, and curiosity. P—151.
- 341. Research in Child Development.** (3) Methodological issues and selected research in child development. Research projects required. P—211.
- 342. Current Issues in Developmental Psychology.** (3) Intensive examination of selected theoretical or research issues in this area. P—211 and 241.
- 343. Developmental Disorders.** (1) Delayed or distorted neural development studied in relation to major disturbances of learning and behavior in children and in the aging. P—211.
- 351. Personality Research.** (3) The application of a variety of research procedures to the study of human personality. Research projects required. P—211.
- 355. Research in Social Psychology.** (3) Methodological issues and selected research in the study of the human as a social animal. Field research projects required. P—211.
- 358. Psychology of Woman.** (3) Intensive study of the behavior of women and its personal application, including consideration of biological, social, and motivational factors. P—151.
- 361. Operant Conditioning and Behavior Modification.** (3) Principles, theory, and experimental research in operant learning, with applications to the modification of behavior in various populations and situations. P—211.
- 362. Psychological Tests and Measurements.** (3) Theory and application of psychological assessment procedures in the areas of intelligence, aptitude, vocational interest, and personality. P—211.
- 363. Survey of Clinical Psychology.** (3) An overview of the field of clinical psychology. P—Permission of instructor.

369. Contemporary Applications of Psychology. (3) Supervised field experience in applied psychology. P—211 and permission of instructor.

378. Instrumentation for Psychological Research. (1) Lecture/demonstration presentation of electrical and mechanical equipment, followed by practical application in small group project work. Assumes no prior knowledge of electricity or construction. P—Permission of instructor.

392. Contemporary Problems in Psychology. (3) Seminar treatment of current theory and research in several frontier areas of psychology. Principally for senior majors planning to attend graduate school. P—211.

FOR GRADUATE STUDENTS

415, 416. Research Design and Analysis in Psychology. (3, 3) Intensive study of the design of experiments and the analysis of research data in psychology. These courses cover conventional methods through complex analysis of variance. Requires previous or concurrent course work in basic statistics. Hills, Wood, Soland

427. Theories of Learning. (2) A critical examination of theories of learning and the evidence on which they are based. Dufor

428. Human Learning and Cognition. (2) Basic theoretical positions concerning the processes of human learning and cognition, including concept development and utilization, rule learning, memory, shift behavior, and organizational structure. Richman

437. Motivation and Emotion. (2) Critical survey of major theoretical approaches to motivation and emotion. Bechtel

442. Seminar in Developmental Psychology. (2) A critical examination of the major findings, principles, and theories of development, with attention to both human and lower-animal research. Staff

452. Seminar in Social Psychology. (2) Content and methodology of social psychology examined through a critical and comparative analysis of contemporary theory and literature debates. Soland

457. Research Methods in Personality. (2) Study of experimental, correlational, and other research strategies in the area of personality, with special emphasis on the recent research literature. Williams

461. Theory and Practice of Psychological Testing. (3) Comparative analysis and examination of standard tests used for psychological assessment, with attention to techniques of administration and test theory. Staff

465. Seminar in Behavior Modification. (3) Analysis of the principles of operant conditioning and their application to the modification of behavior in laboratory, clinical, and school situations. *Spring.* Staff

467. Neuropsychology and Learning Disabilities. (3) Language, perceptual/motor

memory, attentional, and emotional deficits arising from neurological factors are studied in the context of brain functioning and information processing and applied to learning disabilities in children, in both theoretical and practical terms. P—Permission of instructor. *Same course as Neuropsychology 401. Summer only.* Wood

482. Readings and Research in Psychology. (1, 2, or 3) This listing allows the graduate student, working under the supervision of a faculty member, to pursue and receive credit for (1) a special reading project in an area not covered by regular courses or (2) a special research project not related to the master's thesis. Supervising faculty member and hours credit for which enrolled determined by graduate committee prior to registration. *Same course as Neuropsychology 482. Fall and spring.* Staff

489. Contemporary Problems in Psychological Theory. (2) Intensive study of current theoretical problems in a selected area of psychology. Areas from which the content may be drawn in any given year include motivation and emotion, sensation and perception, cognitive processes, biological psychology, animal behavior, and psycholinguistics. *Not offered in 1982–83.* Staff

491, 492. Thesis Research. (1-3, 1-3). Staff

Religion

Reynolda Campus

Carlton T. Mitchell, Chairman

Professors John William Angell, George McLeod Bryan, Robert Allen Dyer,
Emmett W. Hamrick, Carlton T. Mitchell, Charles H. Talbert

Associate Professors John E. Collins, Fred L. Horton Jr., Ralph C. Wood Jr.

Visiting Lecturer Thomas E. Dougherty

Adjunct Professor Jerome R. Dollard

The M.A. degree offered in the Department of Religion serves as either a terminal degree or as preparation for further graduate study in religion.

Graduate courses and opportunities for thesis research are offered in Old Testament, New Testament, theology, the history of Christianity, Christian ethics, religion and literature, world religions, religious education, and pastoral counseling.

Not every course listed below is given every year, but at least two courses numbered 400 or above are offered each semester of the regular academic year. Efforts are made to include during any semester a course for which there is substantial demand.

In addition to the general requirements for admission to the Graduate School, the Department of Religion requires a demonstration of proficiency by courses completed or by examination in at least four of the following areas: Old Testament, New Testament, the history of Christianity, world religions, theology, Christian ethics, history of philosophy, and Biblical languages (Greek and/or Hebrew, as appropriate). Any student who lacks the necessary proficiency must take remedial courses without graduate credit. The department recommends that the modern foreign language requirement be met in French or German. The examination used for this purpose is the Graduate School Foreign Language Test.

M.A. in Pastoral Counseling

The Department of Religion offers a clinically oriented program leading to the M.A. degree in religion with concentration in pastoral counseling. The clinical facilities and the resources of the School of Pastoral Care at the Medical Center are used in connection with this program. Students can pursue certification as a Chaplain Supervisor with the Association of Clinical Pastoral Education or as a Pastoral Counselor with the American Association of Pastoral Counselors. A professional degree (M.Div. or M.R.E.) and a basic unit of clinical pastoral education are acceptable as an equivalency substitute for the modern language requirement. Ordinarily, a student is in residence for one and one-half to two years in order to complete the requirements for this program.

The general M.A. program began in 1967. Study in pastoral counseling was added in 1972. Departmental graduate committee: Angell, Horton (director of graduate studies), Mitchell.

FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

111, 112. Elementary Hebrew. (3, 3) A course for beginners in the classical Hebrew of the Bible, with emphasis on the basic principles of Hebrew grammar and the reading of Biblical texts. (Both semesters must be completed.)

153. Intermediate Hebrew. (3) Intensive work in Hebrew grammar and syntax based upon the reading of selected texts. Readings emphasize post-Biblical Hebrew. P—111, 112 or equivalent.

211, 212. Hebrew Literature. (3, 3) The reading and discussion of significant Biblical texts. P—153.

301. Introduction to Semitic Linguistics. (3) In each of the four weeks the history and structure of one of the languages from the Hamito-Semitic family of languages is studied.

312. Poetic Literature of the Old Testament. (3) A study of Hebrew poetry, its types, its literary and rhetorical characteristics, and its significance in the faith of ancient Israel.

315, 316. Field Research in Biblical Archeology. (3, 3) A study of the religion and culture of the ancient Near East through the excavation and interpretation of an ancient site.

317. The Ancient Near East. (3) A comparative study of ancient Near Eastern cultures and religions.

321. The Quest for the Historical Jesus. (3) An investigation of the possibility and relevance of historical knowledge about Jesus through a consideration of the seminal Lives of Jesus since the eighteenth century.

322. The General Epistles. (3) An exegetical study of two or more of the General Epistles with emphasis on the setting of the epistles in the life of the early church.

- 326. Early Christian Theologians: Paul.** (3) An introduction to the Pauline interpretation of Christianity and its place in the life of the early church.
- 327. Early Christian Theologians: The Fourth Evangelist.** (3) An examination of the Johannine interpretation of Jesus and Christian faith.
- 328. The New Testament and Ethics.** (3) A study of selected ethical issues in the New Testament within the context of Mediterranean culture.
- 332. Religion and the Social Crisis.** (3) An interdisciplinary approach to the study of society today, with particular attention to views of human nature and social institutions as reflected in religion, the social sciences, and related disciplines.
- 334. Christian Ethics and Contemporary Culture.** (3) A study of the encounter between the Christian ethic and the value systems implicit in certain social areas such as economics, politics, race, and sex; bio-medical decisions; and feminist theology.
- 346. Theological Foundations of Religious Education.** (3) A study of theological methodology, theories of learning, and philosophies of education in terms of their implications for religious education.
- 350. Psychology of Religion.** (3) An examination of the psychological elements in the origin, development, and expression of religious experience.
- 354. Religious Development of the Individual.** (3) A study of growth and development through childhood and adolescence to adulthood, with emphasis on the role of the home and the church in religious education.
- 355. Theology of Pastoral Care and Counseling.** (3) A study of the relationship between theology and the purpose, theories, and methods of pastoral care and counseling.
- 60. Hinduism.** (3) A study of the fundamental features of the Hindu tradition.
- 61. Buddhism.** (3) A study of the Buddhist tradition, its fundamental features, and its impact on the culture of Asia.
- 63. Hellenistic Religions.** (3) Consideration of available source materials, questions of method, and bibliography related to such Hellenistic religions as the Mysteries, Hellenistic Judaism, and Gnosticism.
- 64. Islam.** (3) A study of the fundamental concepts of Islamic thought and the historical context of its development. Both the ancient and contemporary impact of the teachings of Islam are considered.
- 65. History of Religions in America.** (3) A study of American religions from colonial times until the present.
- 73. The History of Christian Thought.** (3) A study of the history of Christian thought, beginning with its Hebraic and Greek backgrounds and tracing its rise and development to modern times.
- 74. Contemporary Christian Thought.** (3) An examination of the major issues and personalities in modern theology.
- 76. The Origins of Existentialism.** (3) A study of the principal nineteenth century

figures who form the background for twentieth century Existentialism: Goethe, Kierkegaard, Nietzsche, Dostoevsky, and Tolstoy.

FOR GRADUATE STUDENTS

- 401, 402. Directed Reading.** (3, 3) Staff
- 416. Old Testament Theology.** (3) Major motifs of revelation in the Old Testament analysis of recent attempts to write an Old Testament theology. Horton
- 418, 419. Old Testament Exegesis.** (3, 3) Detailed analysis and exegesis of selected portions of the Hebrew Bible. P—Biblical Hebrew. Hamrick
- 421. New Testament Theology.** (3) A delineation of an approach to New Testament theology as a whole, a consideration of the hermeneutical problem, and an examination of two or three themes in New Testament theology. Talbert
- 423, 424. New Testament Exegesis.** (3, 3) Examination of selected portions of the Greek New Testament, with attention to the tools necessary for exegesis. P—Koine Greek. Talbert
- 438. Seminar in Historical Types of Christian Ethics.** (3) A seminar in the source materials of the main movements of Christian ethics from the time of the early church to Existentialism, especially as they pertain to the major problems of the moral life. Bryant
- 448. Seminar in Religious Education.** (3) An advanced study of problems in the field of religious education, with particular attention to research principles and problems. Mitchell
- 451. Theory and Practice of Pastoral Counseling.** (3) A study of counseling methodologies, psychotherapeutic techniques, personal development, and human behavior in terms of the implications for pastoral counseling. Dougherty
- 455, 456. Clinical Pastoral Education.** (3, 3) Clinical experience in pastoral care including work in crisis situations, seminars, interdisciplinary clinical group session formal pastoral counseling, urban ministry assignments, and participation in group therapy. (Both semesters must be completed.) Staff
- 461. Seminar in Eastern Religion.** (3) Directed study in selected areas of the religious traditions of the East. Collins
- 466. Seminar in Christian History.** (3) Directed study of selected areas in the history of Christianity, including Baptist history. Hinsdale
- 475. Seminar in the History of Christian Thought.** (3) An intensive study of selected period or movement in Christian theological history, with special reference to seminal persons and writings. Angell
- 480. Seminar in Theology and Literature.** (3) An intensive study of a single theologian in relation to a literary figure with a similar religious outlook, the aim being to investigate how literature and theology mutually invigorate and call each other into

question. Representative pairings: Niebuhr/Auden, Barth/O'Connor, Tillich/Updike, Newman/Eliot, Kierkegaard/Percy.

Wood

191, 492. Thesis Research. (3, 3)

Staff

Speech Communication and Theatre Arts

Reynolda Campus

Donald H. Wolfe, Chairman

Professors Julian C. Burroughs Jr., Franklin R. Shirley, Harold C. Tedford

Associate Professors Michael D. Hazen, Donald H. Wolfe

The Department of Speech Communication and Theatre Arts offers graduate study leading to the M.A. degree. The minimum requirement is thirty semester hours of work, six of which are allotted for the thesis.

Graduate study in speech communication and theatre arts is focused on the human being as communicator in a multitude of settings, such as the stage, public affairs, screen, business, television, radio, and daily interaction. The scholarly study of such symbolic activities involves an integration of theory, research, and skills. Two general programs of study are offered: (1) communication/rhetoric, with concentrations in public address, organizational communication, mass communication, and interpersonal communication; and (2) theatre arts. Course work should include a minimum of sixteen hours in the major program, six hours of electives, and six hours of thesis work.

All students must demonstrate competence in a research skill relevant to their thesis and/or professional goals. Competency should be demonstrated in statistical methodology, critical methodology, or an appropriate course or experience such as a foreign language or computer programming designed to meet the student's objectives and approved by the departmental graduate faculty. Graduate courses taken to fulfill the research skill requirement may not count toward the required thirty hours for the M.A.

Students who enroll for the master's degree are expected to have a strong undergraduate background in the discipline or in related areas. Teaching experience may be accepted in partial fulfillment of the background requirement. The student who has deficiencies in undergraduate training may be asked to complete undergraduate requirements at the University while studying for the degree.

All students who desire recommendation for the G Teaching Certificate from the North Carolina Department of Education must take six semester hours of course work in the Department of Education (one 300-level course and one 400-level course). Students should consult the Department of Education concerning these requirements before beginning course work.

Although it is possible to obtain the M.A. degree in one calendar year, most students find it advantageous to take two academic years to complete the program.

The program began in 1969. Departmental graduate committee: Hazen (chairman), Burroughs, Shirley, Tedford, Wolfe.



Students in the Department of Speech Communication and Theatre Arts get practical production experience.

FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

- 317. Theatrical Lighting Design.** (3) The intensive study of the tools and aesthetics of the designer's craft, with practical experience in designing for proscenium, thrust, and arena staging.
- 318. Theatrical Special Effects.** (3) A survey of the various special scenographic and lighting effects used in modern theatre. Special emphasis on effects used in productions done during the semester. P—223, 283H.
- 319. Costume: History and Design.** (3) A study of the evolution of costume through the ages and the design of historic costume for the stage. P—121.
- 320. Theatrical Scene Design.** (3) A study of theories and styles of stage design and their application to the complete play. P—121, 235, or permission of instructor.
- 321. Play Direction.** (3) An introduction to the theory and practice of play directing. A grade is not granted until the student has completed 322.) P—121, 226, or permission of instructor.
- 322. Play Production Laboratory.** (1) A laboratory in the organization, techniques, and problems encountered in a dramatic production. The production of a play for public performance is required. P—321.
- 323. Period and Style in Acting.** (3) A study in social customs, movement, dances, and theatrical styles relating to the performance of drama in historical settings as well as in period plays. The course includes performances in class. P—226.
- 324. Advanced Mime.** (3) This course enlarges upon skills and techniques acquired in 221 (Mime), with the addition of other mime forms. The course includes exercises, rehearsals, and performances. P—221.
- 325. Advanced Acting.** (3) A concentrated study of the actor's art through theory and practice. P—226 or permission of instructor.
- 326. Performance Techniques.** (3) A course in advanced acting techniques, focusing on acting styles appropriate to various modes of theatrical production. Specialized techniques such as dance, singing, and stage combat may also be included. P—226.
- 327. Theatre History I.** (3) A survey of the development of the theatre from its origins to 1870. Includes lectures, readings, and reports.
- 328. Theatre History II.** (3) A survey of the development of the modern theatre from 1870 to the present. Includes lectures, readings, and reports.
- 329. Advanced Theatre Speech.** (3) Specific study in the theory and personal development of vocal melody, rhythm, color, and harmony, according to the form, style, and mood of a theatrical production. P—227 or permission of instructor.
- 330. Seminar in Radio/Television.** (3) Extensive readings in and discussions of fundamental theory and current issues in radio and television. P—241.
- 334. Advanced Radio Production.** (2) Study of advanced radio forms: documentary and drama. P—242.

- 345. Advanced TV Production.** (2) Individual production of complex forms of television such as documentary and drama. P—243.
- 346. Film Criticism.** (3) A study of film aesthetics through an analysis of the work of selected film makers and film critics. P—245.
- 348. Advanced Film Production.** (2) Individual production of complex films such as drama, animation, and documentary. P—246.
- 353. British Public Address.** (3) An historical and critical survey of leading British speakers and their speeches from the sixteenth century to the present.
- 354. American Public Address.** (3) The history and criticism of American public address from Colonial times to the present.
- 355. Directing the Forensic Program.** (3) A pragmatic study of the methods of directing high school and college forensics. Laboratory work in the High School Debate Workshop. *Summer only.*
- 356. The Rhetoric of Race Relations.** (3) A study of race relations in America as reflected in the rhetoric of selected black and white speakers. Students apply the historical/critical method in exploring the effects of discourse on attempts at interracial communication.
- 357. The Rhetoric of the Woman's Movement.** (3) A study of selected women activists and the impact of their speeches and arguments from the 1800s to the present. Emphasis on the new feminist movement.
- 371. Research in Communication.** (3) An introduction to design and statistical procedures for research in communication.
- 372. Survey of Organizational Communication.** (3) An introduction to the role of communication in organizations, with emphasis on field applications.
- 374. Mass Communication Theory.** (3) Theoretical approaches to the role of communication in reaching mass audiences and its relationship to other levels of communication.
- 375. Communication and Conflict.** (3) A study of communication in situations of conflict on the interpersonal and societal levels. P—153 or permission of instructor. *Not offered in 1982–83.*
- 376. Small Group Communication Theory.** (3) Advanced study of the principles of small group interaction and discussion leadership. P—155 or permission of instructor.
- 378. Semantics and Language Behavior.** (3) A study of the syntactic aspects of communicative messages. *Not offered in 1982–83.*

FOR GRADUATE STUDENTS

- 421. Modern Theatre Production.** (3) A study of the development of modern

theatrical production. The relationship of Realism, Naturalism, Expressionism, and other contemporary styles to production techniques. Lecture, readings, and projects.

Wolfe

23. Advanced Directing. (3) A study of modern and period styles and techniques of directing. Application of styles to selected plays and various periods, with emphasis on problems in staging for modern audiences.

Staff

26. Evolution of Dramatic Theory: Seminar. (3) A study of selected theories which have influenced theatre practice from the Greeks to the present.

Tedford

28. The Play. (3) Dramatic literature for the director, actor, and playwright. An intensive reading program in the plays which constitute the repertory of the modern theatre, with attention to the problems presented to the theatre artist. Reading, discussion, and reports.

Tedford

51. Classical Rhetorical and Communication Theory. (3) A study of the development and consequent influence of the Greek and Roman rhetorical tradition, with emphasis on the contributions to the theory and criticism of rhetoric by Plato, Aristotle, Cicero, Quintilian, Campbell, and Whatley.

Shirley

52. Contemporary Rhetorical and Communication Theory. (3) An introduction to theory building in human communication and rhetoric, with a survey and evaluation of major contemporary groupings of theorists. Major approaches studied are those which emphasize the symbol (George Herbert Mead and Kenneth Burke), human relations (Martin Buber), the media (Marshall McLuhan), and systems (Norbert Wiener).

Hazen

53. Seminar in Persuasion. (3) A critical examination of the logical, psychological, sociological, and cultural dimensions of discourse. Readings in theories of persuasion from the related fields of logic, politics, and psychology. *Not offered in 1982-83.*

Hazen

54. Rhetorical Criticism. (3) The study of critical approaches to the role of rhetoric in contemporary society, with emphasis on methodology.

Go

53. Proseminar in Communication. (3) A survey of the principles involved in speech communication. An introduction to graduate studies.

Shirley

54. Research and Theory of Organizational Communication. (3) Advanced study of theoretical approaches to the role of communication in organizations and empirical application of such theories.

Hazen

60. Special Seminar. (3) The intensive study of selected topics in communication. Topics may be drawn from any theory or context area of communication, such as persuasion, organizational communication, film, or theatre.

Staff

1, 482. Readings and Research in Speech Communication or Theatre. (3, 3) Students may receive credit for a special reading project in an area not covered by regular courses or for a special research project not related to the master's thesis.

Staff

1, 492. Thesis Research. (3, 3)

Staff

Interdisciplinary Program in Comparative and Experimental Pathology

(A joint program of the Departments of Pathology and Comparative Medicine
Hawthorne Campus)

This course of study and research leading to the M.S. or Ph.D. degree is designed for students who wish to prepare for a career of research or research/teaching in pathobiology, the study of the fundamental mechanisms of disease processes. By means of course work and seminars, the student is given a firm background in the basic medical sciences, including pathology. Advanced course work is designed to fit the interests of the individual student, and disciplinary strength may be developed in biochemical, metabolic, or morphologic aspects of disease. Special emphasis is placed on comparative pathology and on experimental design, procedure, and interpretation of results to determine mechanisms involved in disease processes.

Research opportunities are available in the areas of cardiovascular disease, naturally occurring diseases of laboratory animals, arterial metabolism, hypertension, diabetes mellitus, reproduction and behavior, and others. The extensive facilities of the Departments of Comparative Medicine and Pathology are available.

The program is open to qualified applicants with the B.S. or B.A. degree and strong background in the physical and biological sciences. The program is also open to applicants holding the M.D. or D.V.M. degree who wish the advanced degree to prepare them for careers in research. For the M.S. and Ph.D. degrees the graduate Program in Comparative and Experimental Pathology requires either a reading knowledge of French or German or competence in a special skill such as statistical medical electronics, computer programming, or electrocardiography. The Ph.D. program began in 1969, the M.S. in 1970.

301. Introduction to Animal Experimentation. See Comparative Medicine.

304. Microanatomy I—Cells and Tissues. See Anatomy.

391. Biochemistry of Medicine. See Biochemistry.

401, 402. Diseases of Laboratory Animals. See Comparative Medicine.

402. Fundamentals of Pathology. See Pathology.

404. Animal Models in Biomedical Research. See Comparative Medicine.

405. Basic Primatology. See Comparative Medicine.

406. Medical Primatology. See Comparative Medicine.

408. Primate Ethology. See Comparative Medicine.

409, 410. Advanced Topics in Comparative Medicine. See Comparative Medicine.

410. Pathologic Biochemistry. See Pathology.

411, 412. Necropsy Conference. See Comparative Medicine.

415, 416. Advanced Topics in Pathology. See Pathology.

417. Pathobiology of Atherosclerosis. See Pathology.



Professor Keith O'Steen and graduate students Thane Duncan and Clara Miller preparing to inject animals with hormones



column chromatography being run by graduate students Susan Olson and Donald Laird and Assistant Professor Ibrahim Ades

418. Diagnostic Clinical Microbiology. See Pathology.

427, 428. Comparative and Experimental Pathology Seminar. See Pathology.

429, 430. Research. See Pathology.

Interdisciplinary Courses Hawthorne Campus

393. Introduction to Medicine. (22) An interdisciplinary presentation of the knowledge and concepts contributing to an understanding of disease states in man and the use of drugs and other means of restoring to normal abnormalities of structure and function. The course is designed to prepare the student for the clinical experience by emphasizing the correlation and application of material from the pre-clinical sciences. After an initial introduction to the general principles of pathology, pathophysiology, pharmacology, and clinical microbiology, the material is organized on the basis of the major systems of the body and presented with emphasis on the correlation of the pathophysiologic processes, the immunologic and genetic bases of disease, the gross and histopathologic changes, and the pharmacologic and therapeutic properties of drugs. The subject matter includes a consideration of physical, chemical, and biological agents of disease, abnormal immune mechanisms, dysontogenesis, neoplasia, endocrinopathies, metabolic and nutritional imbalances; disorders of the nervous, hematopoietic circulatory, renal, respiratory, gastrointestinal, reproductive, musculoskeletal, special senses, and psychophysiological and behavioral disturbances. Clinical presentations with patients provide the background for the elements of medical history-taking, performing physical and mental status examinations, and interpretations of the significance of clinical laboratory test results. Lectures, conferences, laboratories, and clinical presentations by the staffs of the departments of physiology and pharmacology, biochemistry, pathology, microbiology and immunology, medicine, psychiatry, and pediatrics. Separate graduate credit for *Abnormal Physiology* (4) and *Medical Pharmacology* (8) may be obtained by attendance at lectures, laboratories, and other teaching sessions selected by the departments. P—392 and permission of instructor.

415. Sensory Neurobiology. (3) Audition, olfaction, somatic senses, taste, and vision; anatomy, physiology, and behavior involved in the sensory neurobiology of the systems, including central nervous system plasticity. Laboratory experience includes electrophysiological recording from receptors and sensory nerves. P—Anatomy 415 or equivalent course and permission of instructors. *Offered in even-numbered years.*

Deadwyler, Henkel, Miller, O'Steen

Research in Clinical Science Departments Hawthorne Campus

Directed research in any of the following departments carries the numbers 491-492: family and community medicine, medical social sciences, medicine, neurology, psychiatry, radiology, and surgery.

Degrees Conferred

December 19, 1980

Doctor of Philosophy

Deborah L. Bryant Collinsville, Virginia

B.A., University of Virginia

Dissertation: Hematopoietic Regulatory Factors in Normal
and Avian Myeloblastosis Virus-Induced
Leukemic Chickens

Adviser: William H. Dodge, Microbiology and
Immunology

Joseph William Camp Jr. Palatine, Illinois

B.S., M.S., Illinois State University

Dissertation: Studies on the Population Biology of
Diplostomulum Scheuringi in Mosquitofish, *Gambusia*
Affinis

Adviser: Gerald W. Esch, Biology

Shamroen Chetty Bangkok, Thailand

B.S., Mahidol University

Dissertation: Purification and Characterization of the
Pneumococcal Purpura-Producing Principal (PPP)

Adviser: Arnold S. Kreger, Microbiology and Immunology

Master of Arts

Larria de los Angeles Castro H. San José, Costa Rica

B.A., University of Costa Rica

Thesis: The Sacredness of the Body and Human Existence
in Walt Whitman's "Children of Adam"

Adviser: Robert N. Shorter, English

John Henry Dery Fenton, Michigan

B.S., Adrian College

Thesis: A Comparison of Maximum Symptom-Limited
Heart Rate, Oxygen Uptake and Blood Pressure
During Tethered Swimming and Arm Crank
Ergometry

Adviser: William Thomas Boone, Physical Education

- Kevin Barry Doherty** Middletown, New Jersey
 B.S., Montclair State College
 Thesis: The Use of CO₂ Rebreathing for Determining
 Hemodynamic Changes in Cardiac Patients at
 25%, 50% and 75% of Their Prescribed Exercise
 Heart Rate Range
 Adviser: William Thomas Boone, Physical Education
- Nanette Lucas Henry** Shawnee, Oklahoma
 B.A., Wake Forest University
 Thesis: A Thoracic and Upper Extremity Dissection of a
 Female *Homo Sapiens*
 Adviser: William Thomas Boone, Physical Education
- Kenneth Stanley Jago** Charleston, South Carolina
 B.S., Hillsdale College
 Thesis: A Comparison of Predicted and Achieved Oxygen
 Uptakes Among Cardiac Patients
 Adviser: Paul M. Ribisl, Physical Education
- Karl V. Kropp** Columbus, Ohio
 B.S., Wake Forest University
 Thesis: Supercompact Spaces and Their Graph
 Representations
 Adviser: W. Graham May, Mathematics
- Kathy Marie Learner** Charlotte, North Carolina
 B.A., Meredith College
 Thesis: The Effect of Modifying the Cognitive Tempo of
 Reading Disabled Children on Reading
 Comprehension and Self-Concept
 Adviser: Charles L. Richman, Psychology
- Brenda Lynn Linthicum** Randleman, North Carolina
 B.A., University of North Carolina at Greensboro
 Thesis: Pettit Site Masonry: A Study of Intrasite Social
 Integration
 Adviser: J. Ned Woodall, Anthropology
- Chris Ciminello Meyer** Columbus, Ohio
 B.S., Ohio State University
 Thesis: Fatigue Tolerance in Female Distance Runners
 Adviser: Paul M. Ribisl, Physical Education

- Charles Isidore Nero** New Orleans, Louisiana
 B.A., Xavier University
 Thesis: A Transactional Approach to Analyzing the Conflict
 Between the Communist Worker's Party and the
 Ku Klux Klan
 Adviser: Michael D. Hazen, Speech Communication and
 Theatre Arts
- Lauris Joan Parker** High Point, North Carolina
 B.A., Wake Forest University
 Thesis: Expectancies and Perceived Effort as Mediators of
 Coaching Behavior and Players' Self Concept in
 Youth League Basketball
 Adviser: Walter J. Rejeski Jr., Physical Education
- Clair Hodnett Price** Winston-Salem, North Carolina
 B.A., University of the South
 Thesis: Effects of Rate of Auditory Information Processing
 on Reading Ability and Memory Test
 Performance
 Adviser: Charles L. Richman, Psychology
- Kathy Ann Dlabal Rucker** Winston-Salem, North Carolina
 B.A., St. Mary's College
 Thesis: A Song of Violence: Psalm 137 in Historical-Critical
 Study and in Augustine
 Adviser: Fred L. Horton Jr., Religion
- Leonor Marsh Shepard** Chattanooga, Tennessee
 B.A., University of Tennessee
 Thesis: Conceptual Level Theory and Performance on
 Verbal and Non-Verbal Tasks
 Adviser: David W. Catron, Psychology
- Leane Mood Smith** College Park, Maryland
 B.A., Jacksonville University
 Thesis: Self-Esteem and Locus of Control as Related to
 Achievement Motivation and Intellectual
 Functioning
 Adviser: Charles L. Richman, Psychology
- Robert Allen Wampler** Bristol, Tennessee
 B.A., King College
 Thesis: In Search of a Liberal Consensus: The League for
 Independent Political Action 1928-1933
 Adviser: Richard L. Zuber, History

- John Wayne Weaver** Charlotte, North Carolina
 B.A., Wake Forest University
 Thesis: Isolation and Hemoglobin Content of Immature
 Red Blood Cells in Anemia-Stressed Rainbow
 Trout (*Salmo gairdneri*)
 Adviser: Hugo C. Lane, Biology

Master of Arts in Education

- Vicki Crews Brill** Winston-Salem, North Carolina
 B.A., Wake Forest University
 Thesis: Bilingual Education: One Answer to the
 Multi-Ethnic Challenge
 Adviser: Joseph O. Milner, Education

- Joseph Henry Bunch** Edenton, North Carolina
 B.A., Wake Forest University
 Research Report: A Study of the Effect of the Systematic
 Training for Effective Parenting Approach
 Self-Reported Levels of Anxiety, Impulsivity
 Depression, and Emotional Stability
 Adviser: Leonard P. Roberge, Education

- Barbara Ann Grant Canupp** Clemmons, North Carolina
 B.A., Wake Forest University
 Research Report: A Study of Reported Religiosity and
 Counselor Attitudes and Behavior
 Adviser: Thomas M. Elmore, Education

- Eleanore Jeanine Chadwell** Winston-Salem, North Carolina
 B.B.A., Wake Forest University
 Research Report: A Study of the Relationship Between
 Anxiety and the Counseling Orientations of
 Counselors-In-Training
 Adviser: Thomas M. Elmore, Education

- Anna Ruth Grady** Greenville, Tennessee
 B.A., Wake Forest University
 Research Report: A Comparison of Moral Develop-
 ment Between Children from Father-Present
 and Father-Absent Homes
 Adviser: Leonard P. Roberge, Education

- Vickie Bowman Jones** Danville, Virginia
 B.A., University of Richmond
 Thesis: Use of the Iowa Algebra Aptitude Test in
 Predicting Achievement in First-Year Algebra in
 the Danville Public schools
 Adviser: Herman J. Preseren, Education

Master of Science

- erry Wayne Lawson** Winston-Salem, North Carolina
 A.B., Elon College
 Thesis: The Lingual and Pharyngeal Distribution of the
 Glossopharyngeal Nerve in the Rat
 Adviser: Inglis J. Miller Jr., Anatomy

May 18, 1981

Doctor of Philosophy

- hoderick Edmiston Brown Jr.** Hendersonville, North Carolina
 B.A., University of North Carolina, Chapel Hill
 Dissertation: Relationships Between the Mitochondrial
 Adenosine Triphosphatase and its Surrounding
 Amphiphilic Environment
 Adviser: Carol C. Cunningham, Biochemistry

- avid Maxwell Lyerly** Granite Quarry, North Carolina
 B.S., University of North Carolina, Chapel Hill
 Dissertation: Evaluation of the Role(s) of Serratia Proteases
 in the Pathogenesis of *Serratia Marcescens* Keratitis
 and Pneumonia
 Adviser: Arnold S. Kreger, Microbiology and Immunology

- harles Augustine Napolitano** Cranston, Rhode Island
 B.S., Brown University
 Dissertation: The Effects of a Lipid Diet on Myocardial
 Contractility and Fragmented Sarcoplasmic
 Reticulum in the New Zealand White Rabbit
 Adviser: Darwin W. Peterson, Physiology

Master of Arts

- Richard Douglas Boese** Charleston, South Carolina
 B.A., David Lipscomb College
 Thesis: Born in Controversy: The United States Custom
 House at Charleston, South Carolina, Its History
 and Preservation
 Adviser: J. Edwin Hendricks, History
- Stephen Reno Claggett** Louisville, Kentucky
 B.A., Centre College of Kentucky
 Thesis: Archaic Stage Adaptations in the Piedmont: An
 Evaluation of Four Models Using Data From
 North-Central North Carolina
 Adviser: J. Ned Woodall, Anthropology
- James Kevin Dill** Winston-Salem, North Carolina
 B.S., East Carolina University
 Thesis: Differences in Selected Perceptual and Physiological
 Variables of Males and Females at Work
 Adviser: Walter J. Rejeski Jr., Physical Education
- Leslie Gayle French** Wexford, Pennsylvania
 B.S., Ursinus College
 Thesis: Body Awareness and Motor Development in
 Preschool Children
 Adviser: William L. Hottinger, Physical Education
- Tony Lee Glover** Jamestown, North Carolina
 B.S., High Point College
 Thesis: The Effects of Three Months of Prescribed -
 Exercise on the Anaerobic Threshold in Patients
 with Coronary Heart Disease
 Adviser: Paul M. Ribisl, Physical Education
- Francis Wishart Mitchell** Great Falls, Montana
 B.A., University of Utah
 Thesis: Rhetoric and Culture: A Rhetorical Criticism of
 China's Nineteenth Century Response to the West
 Adviser: Michael D. Hazen, Speech Communication and
 Theatre Arts

Ceresa Irene Newsome Selma, North Carolina
 B.A., University of North Carolina, Chapel Hill
 Thesis: An Investigation of the Roles of Motivation and
 Processing in Age-Related Memory Deficits
 Adviser: Robert H. Dufort, Psychology

Mary Elizabeth Shelley Nichols, South Carolina
 B.A., University of South Carolina
 Thesis: Problem Solving as a Means for Inducing
 Organization in Children's Recall
 Adviser: Cecilia H. Solano, Psychology

William W. Sloan Jr. Franklin, North Carolina
 A.B., Davidson College
 Thesis: Verbal Communication of Lonely Versus
 NonLonely Students in Roommate Versus
 Stranger Dyads
 Adviser: Cecilia H. Solano, Psychology

isa Anne Wolford Atlanta, Georgia
 A.B., Lenoir Rhyne College
 Thesis: Historical Data as a Basis for Characterization: An
 Actress's Approach to the Character of Emily
 Dickinson in William Luce's *The Belle of Amherst*
 Adviser: Harold C. Tedford, Speech Communication and
 Theatre Arts

John S. Yuille Old Bridge, New Jersey
 B.A., Butler University
 Thesis: Dance Training for the Actor
 Adviser: Donald H. Wolfe, Speech Communication and
 Theatre Arts

Master of Arts in Education

Ian Spencer Cameron Winston-Salem, North Carolina
 B.A., University of North Carolina, Chapel Hill
 Research Report: Perceptions of a College Environment
 by its Graduating Seniors
 Adviser: Leonard P. Roberge, Education



Graduate student at work in the anthropology laboratory.

- Dorothy Suzanne Camp** Ft. Lauderdale, Florida
 B.A., Salem College
 Research Report: A Comparison of Amounts of Alcohol
 Consumption of College Women as They Relate
 to Academic Class and Grade Point Average
 Adviser: Leonard P. Roberge, Education
- Cynthia Ann Gibson** Greensboro, North Carolina
 B.A., Duke University
 Research Report: The Relationship Between Personality
 Type and Preference for Counseling Approach
 Adviser: Thomas M. Elmore, Education
- Frances Moody Guthrie** Asheboro, North Carolina
 B.A., East Carolina University
 Thesis: A Compare/Contrast Strategy of Mediated Word
 Identification for Educable Mentally
 Handicapped Children
 Adviser: Patricia M. Cunningham, Education
- Carol Eidel Heames** Winston-Salem, North Carolina
 B.S., University of Pittsburgh
 Research Report: A Comparison of Values of Three
 Groups of Female Graduate Students
 Adviser: Leonard P. Roberge, Education
- Lynn Ellen Jones Moore** Mocksville, North Carolina
 B.A., Catawba College
 Thesis: A Comparison of Children's Ability to Define and
 to Apply Phonics Terms
 Adviser: John H. Litcher, Education
- Roger Roosevelt Pearman Jr.** Greensboro, North Carolina
 B.A., Wake Forest University
 Research Report: The Relationship of Selected Variables
 to Personal-Social Experiences of College Seniors
 While Controlling for Satisfaction with Academic
 Environment
 Adviser: Thomas M. Elmore, Education
- Shirley Austin Tuttle** Winston-Salem, North Carolina
 B.A., Winston-Salem State University
 Research Report: The Relationship Between
 Self-Actualization and Vocational Maturity in
 High School Seniors
 Adviser: Thomas M. Elmore, Education

Henriette M. Neal Asheboro, North Carolina
 B.S., University of North Carolina, Chapel Hill
 Thesis: A Study of the Activation of Glycogen Synthase and
 Glycogen Phosphorylase in Human
 Polymorphonuclear Leukocytes
 Adviser: Lawrence R. DeChatelet, Biochemistry
 David A. Bass, co-adviser

Thomas James O'Hara III Westlake, Ohio
 B.S., Wake Forest University
 Thesis: Spectral Studies of Some Sulfur-Oxygen Containing
 Compounds Using Oxygen-18 Isotopic
 Substitution: Vibrational Assignments for SOF_2 ,
 CF_3 , SO_2 , OH and $(\text{CF}_3\text{SO}_2)_2\text{O}$
 Adviser: Ronald E. Nofle, Chemistry

Oscar David Redwine Kenansville, North Carolina
 B.S., Wake Forest University
 Thesis: Preparation, Characterization and Study of Spin
 Labeled Bleomycin- A^2
 Adviser: Phillip J. Hamrick Jr., Chemistry

William P. Smales Winston-Salem, North Carolina
 B.S., University of Tennessee
 Thesis: Cyclic AMP-Dependent and Cyclic GMP-Dependent
 Protein Kinases in Renal Cortical Homogenates
 Adviser: David M. Biddulph, Anatomy

August 4, 1981

Doctor of Philosophy

Eric Newell Olson Norwich, New York
 B.A., Wake Forest University
 Dissertation: Biochemical Alterations in Skeletal Muscle
 Membranes
 Adviser: Peter B. Smith, Biochemistry

Master of Arts

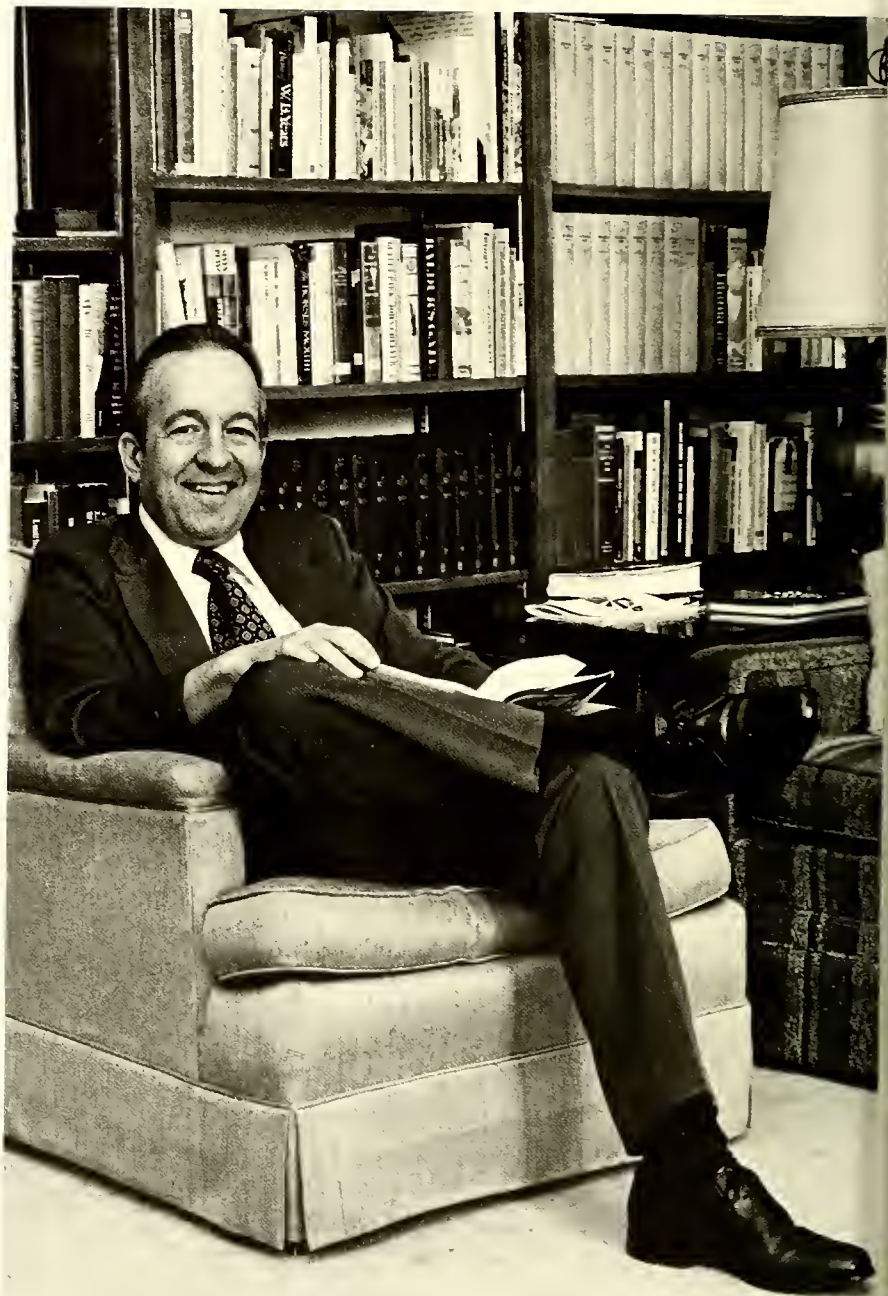
Gary R. Brodowicz Sterling Heights, Michigan
 B.S. Ed., University of Michigan
 Thesis: The Influence of Toe Clips During Cycle
 Ergometry on Anaerobic Threshold of Trained
 Cyclists and Non-Cyclists
 Adviser: Paul M. Ribisl, Physical Education

- Kevin Patrick Cox** Tyler, Texas
 B.A., East Texas State University
 Thesis: The Fire and the Hearth: Faulkner's Insistence on
 Moral Responsibility
 Adviser: Lee H. Potter, English
- Hernando Antonio del Portillo** Bogotá, Colombia
 B.S., University of LaSalle
 Thesis: Host-Induced Negative Phototaxis in the Association
 of the Water-Mite *Unionicola Formosa* with the
 Freshwater Mussel *Anodonta Imbecilis*
 Adviser: Ronald V. Dimock Jr., Biology
- Mary McLean Hix** Clermont, Florida
 B.A., Wake Forest University
 Thesis: Weather Imagery in Jane Austen's *Mansfield Park*
 and *Emma*
 Adviser: Robert Lovett, English
- Anita Elizabeth Jones** Baltimore, Maryland
 B.A., Western Maryland College
 Thesis: Captain Charles Ridgely, Builder of Hampton
 Mansion: Mariner, Colonial Agent, Ironmaster,
 and Politician
 Adviser: J. Edwin Hendricks, History
- William J. Kehr** Matthews, North Carolina
 A.B., Davidson College
 Thesis: Reward Allocation as a Function of Reward Scarcity,
 Availability of Input Information, and Sex of
 Group
 Adviser: Cecilia Solano, Psychology
- Douglas Scott King** Albany, California
 A.B., University of California, Berkeley
 Thesis: The Effect of Toeclip Use on Maximal Oxygen
 Uptake During Bicycle Ergometry in Competitive
 Cyclists and Trained Non-Cyclists
 Adviser: Paul M. Ribisl, Physical Education

- Richard James Kuczynski** Cohoes, New York
 B.A., University of Dayton
 Thesis: An Empirical Study of the Effects of Physical
 Appearance and a Self-Disclosing Communication
 Strategy on Attraction and Communication
 Behavior
 Adviser: Michael D. Hazen, Speech Communication and
 Theatre Arts
- Barbee Claudette Myers** East Bend, North Carolina
 B.S., Wake Forest University
 Thesis: A Lower Extremity Dissection of a Male *Homo*
Sapiens
 Adviser: William T. Boone, Physical Education
- Carl Usry Patterson Jr.** Raleigh, North Carolina
 B.S., Wake Forest University
 Thesis: A Comparison of Maximum Symptom-Limited
 Cardiorespiratory and Hemodynamic Variables
 During Tethered Swimming With and Without a
 Floatation Device
 Adviser: William T. Boone, Physical Education
- Sybil Strupe Rights** Winston-Salem, North Carolina
 B.A., Agnes Scott College
 Thesis: Hardy's "Scripture Manner": Biblical Allusion in *Far*
From The Madding Crowd, *The Woodlanders*, *Tess Of*
The D'Urbervilles, and *Jude The Obscure*
 Adviser: John A. Carter, English
- Sandra M. Saunders** Franklin, North Carolina
 B.A., Western Carolina University
 Thesis: Blake's Treatment of Women in *Jerusalem*
 Adviser: Edwin Wilson, English
- Nancy Webster Schultz** Winston-Salem, North Carolina
 B.A., Wake Forest University
 Thesis: The Civil War Career of John Gibbon
 Adviser: Richard L. Zuber, History
- Peter William Wooldridge** Lynchburg, Virginia
 B.S., The College of William and Mary in Virginia
 Thesis: Teacher's Choice of Punishment as a Function of a
 Student's Sex, Age, Race and IQ Level
 Adviser: Charles Richman, Psychology

Master of Arts in Education

- Kathryn Parker Brown** Winston-Salem, North Carolina
 B.S., Wake Forest University
 Research Report: Locus of Control in Learning
 Disabled Students
 Adviser: Thomas M. Elmore, Education
- Shirley Sue Crump** Winston-Salem, North Carolina
 B.S., Guilford College
 Thesis: A Proposal for the Upgrading of Credentials for
 Graduates of the Nurse Anesthesia Program of
 the North Carolina Baptist Hospital and the
 Bowman Gray School of Medicine
 Adviser: J. Don Reeves, Education
- Karen S. Miller** Winston-Salem, North Carolina
 B.A., North Carolina State University
 Research Report: An Examination of the Relation-
 ship Between Self Concept and Academic
 Achievement of Fifth and Sixth Grade Boys and
 Girls
 Adviser: Leonard P. Roberge, Education
- Elizabeth Caroline Reiser** Birmingham, Alabama
 A.B., Duke University
 Research Report: The Effects of Stress on
 Academic Performance as Mediated by
 Personality Factors
 Adviser: Thomas M. Elmore, Education
- Patricia Lovell Speas** St. Petersburg, Florida
 B.A., Wake Forest University
 Research Report: Sex-Role Stereotyping and Its
 Influence on Children's Occupational
 Attitudes and Preferences
 Adviser: Leonard P. Roberge, Education



Provost and Professor of English Edwin Graves Wilson

The Board of Trustees

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Terms Expiring December 31, 1983

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Terms Expiring December 31, 1984

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Egbert L. Davis Jr., Winston-Salem	Connecticut
Mark Holt, Fayetteville	W. Boyd Owen, Waynesville
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James W. Mason, Laurinburg	Eugene Worrell, Charlottesville, Virginia

Terms Expiring December 31, 1985

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R. Stuart Dickson, Charlotte	Alton H. McEachern, Greensboro
Floyd Fletcher, Durham	J. Robert Philpott, Lexington
J. Smith Young, Lexington	

Officers

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John G. Williard, Winston-Salem, Treasurer and Assistant Secretary
Womble Carlyle Sandridge & Rice, Winston-Salem, General Counsel
Leon H. Corbett Jr., Winston-Salem, Associate General Counsel

The Board of Visitors

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Chairman, University Board of Visitors

James Alfred Martin Jr., Laurinburg
Chairman, College Board of Visitors

Wake Forest College and Graduate School

Terms Expiring December 31, 1982

Samuel H. Adler, Rochester, New York
Maya Angelou, Winston-Salem
William L. Bondurant, Winston-Salem
Wallace Carroll, Winston-Salem
Ralph Ellison, New York, New York
Harold T. P. Hayes, New York,
New York

Albert R. Hunt Jr., Washington, D.C.
Graham A. Martin, Winston-Salem
Martin Mayer, New York, New York
Jasper D. Memory, Raleigh
Bill Moyers, New York, New York
Eugene Owens, Charlotte

Terms Expiring December 31, 1983

George Anderson, Jacksonville, Florida
A. R. Ammons, Ithaca, New York
Bert Bennett, Winston-Salem
John Chandler, Williamstown,
Massachusetts
Merrimon Cuninggim, Winston-Salem
Ronald Deal, Hickory
Arthur E. Earley, Cleveland, Ohio

Constance Gray, Winston-Salem
Charles U. Harris, Delaplane, Virginia
Hubert Humphrey, Greensboro
James Alfred Martin Jr.,
New York, New York
Earl Slick, Winston-Salem
Zachary T. Smith, Winston-Salem
Ferne Sticht, Winston-Salem

Terms Expiring December 31, 1984

David Bryant, S. Charleston,
West Virginia
Aurelia Gray Eller, Winston-Salem
Frank Forsyth, Winston-Salem
Anne Reynolds Forsyth, Winston-Salem
Stanley Frank, Greensboro
Edward Gould, Atlanta, Georgia

Jack Hatcher, Lebanon, New
Hampshire
Connie William King, Nashville,
Tennessee
John F. McNair III, Winston-Salem
Wayne Oates, Louisville, Kentucky
Lorraine F. Rudolph, Winston-Salem

Frank Willingham, Houston, Texas

Terms Expiring December 31, 1985

Herbert Brenner, Winston-Salem
F. Hudnall Christopher Jr.,
Winston-Salem
E. Garland Herndon, Atlanta, Georgia
Thomas W. Lambeth, Winston-Salem
Robert Maloy, Washington, D. C.

K. Wayne Smith, Washington, D. C.
Leland T. Waggoner, Short Hills,
New Jersey
Meade Willis, Winston-Salem
J. Tylee Wilson, Winston-Salem
Judy Woodruff, Washington, D. C.

Ex-Officio Members

Jerry Attkisson, President, Alumni Council, Atlanta, Georgia
James W. Mason, Chairman, Planning and Development Committee,
Board of Trustees

The Administration

Date following name indicates year of appointment.

University

James R. Scales (1967)	<i>President</i>
B.A., Oklahoma Baptist; M.A., Ph.D., Oklahoma; Litt.D., Northern Michigan; LL.D., Alderson-Broadbudd; LL.D., Duke; Litt.D., Belmont Abbey	
Edwin Graves Wilson (1946, 1951)	<i>Provost</i>
B.A., Wake Forest; A.M., Ph.D., Harvard	
Manson Meads (1947, 1963)	<i>Vice President for Health Affairs and Director of the Medical Center</i>
B.A., California; M.D., Sc.D., Temple	
John G. Williard (1958)	<i>Vice President and Treasurer</i>
B.S., North Carolina (Chapel Hill); C.P.A., North Carolina	
G. William Joyner Jr. (1969)	<i>Vice President for Development</i>
B.A., Wake Forest	
Russell H. Brantley Jr. (1953)	<i>Assistant to the President and Director of Communications</i>
B.A., Wake Forest	
Leon Corbett (1968)	<i>Associate General Counsel</i>
B.A., J.D., Wake Forest	
Ross A. Griffith (1966)	<i>Director of Equal Opportunity</i>
B.S., Wake Forest; M.Ed., North Carolina (Greensboro)	

College

Thomas E. Mullen (1957)	<i>Dean of the College</i>
B.A., Rollins; M.A., Ph.D., Emory	
Robert Allen Dyer (1956)	<i>Associate Dean</i>
B.A., Louisiana State; Th.D., Ph.D., Southern Baptist Seminary	
Toby A. Hale (1970)	<i>Assistant Dean and Director of Educational Planning and Placement</i>
B.A., Wake Forest; M.Div., Duke; Ed.D., Indiana	
N. Rick Heatley (1970)	<i>Associate in Academic Administration and Associate Director of Educational Planning and Placement</i>
B.A., Baylor; M.A., Ph.D., Texas	
Patricia Adams Johannsson (1969)	<i>Assistant to the Dean of the College</i>
B.A., Winston-Salem State; M.A., Wake Forest	

Graduate School

Henry Smith Stroupe (1937)	<i>Dean of the Graduate School</i>
B.S., M.A., Wake Forest; Ph.D., Duke	
Harold O. Goodman (1958)	<i>Associate Dean for Biomedical Graduate Studies</i>
B.A., M.A., Ph.D., Minnesota	

School of Law

John D. Scarlett (1955, 1979) B.A., Catawba; J.D., Harvard	<i>Dean of the School of Law</i>
Leon H. Corbett Jr. (1968) B.A., J.D., Wake Forest	<i>Associate Dean</i>
Robert F. Clodfelter (1981) LL.B., Duke	<i>Associate Dean for Academic Affairs</i>
Charles H. Taylor (1976) B.S., J.D., Wake Forest	<i>Director of Continuing Legal Education</i>
Jean K. Hooks (1970)	<i>Director of Admissions and Assistant to the Dean</i>
Laura L. Meyers (1959)	<i>Director of Placement</i>

Babcock Graduate School of Management

Edward L. Felton Jr. (1980) B.A., Richmond; B.D., Southeastern Seminary; M.B.A., D.B.A., Harvard	<i>Dean of the Babcock Graduate School of Management</i>
William L. Berry (1979) B.S., Virginia Polytechnic; M.B.A., Western Kentucky; D.B.A., Harvard	<i>Associate Dean for Academic Affairs</i>
Michael L. Rice (1980) B.S., M.B.A., Florida State; Ph.D., North Carolina (Chapel Hill)	<i>Associate Dean for Administration</i>
James M. Clapper (1975) B.S., M.S., Rensselaer; Ph.D., Massachusetts	<i>Director of MBA Executive Program</i>
Jean Hopson (1970) B.A., Murray State; M.S. in L.S., George Peabody; M.B.A., Wake Forest	<i>Assistant Dean</i>
Bruce R. Holliday (1981) B.A., Davidson; M.B.A., Wake Forest	<i>Director of Admissions</i>

Bowman Gray School of Medicine

Richard Janeway (1966) B.A., Colgate; M.D., Pennsylvania	<i>Dean of the Bowman Gray School of Medicine</i>
Nat E. Smith (1976) B.A., Erskine; M.D., Georgia	<i>Associate Dean</i>
C. Nash Herndon (1942, 1966) B.A., Duke; M.D., Jefferson	<i>Senior Associate Dean for Research Development</i>
J. Kiffin Penry (1979) B.S., M.D., Wake Forest	<i>Associate Dean for Research Development (Neuroscience)</i>
Harold O. Goodman (1958) B.A., M.A., Ph.D., Minnesota	<i>Associate Dean for Biomedical Graduate Studies</i>

- Clyde T. Hardy Jr. (1941) *Associate Dean for Patient Services*
B.A., Richmond
- Warren H. Kennedy (1971) *Associate Dean for Administration*
B.B.A., Houston
- John D. Tolmie (1970) *Associate Dean for Student Affairs*
B.A., Hobart; M.D., McGill
- Emery C. Miller Jr. (1955) *Associate Dean for Continuing Education*
B.A., North Carolina (Chapel Hill); M.D., Johns Hopkins
- John H. Felts (1955) *Associate Dean for Admissions*
B.S., Wofford; M.D., South Carolina
- James C. Leist (1974) *Assistant Dean for Continuing Education*
B.S., Southeastern Missouri State; M.S., Ed.D., Indiana
- Dennis Hoban (1978) *Director of the Office of Educational Research and Services*
B.A., Villanova; M.S., Ed.D., Indiana

School of Business and Accountancy

- Thomas C. Taylor (1971) *Dean of the School of Business and Accountancy*
B.S., M.A., North Carolina (Chapel Hill);
Ph.D., Louisiana State; C.P.A., North Carolina

Summer Session

- Perceval Perry (1939, 1947) *Dean of the Summer Session*
B.A., Wake Forest; M.A., Rutgers; Ph.D., Duke

Student Services

- David Allen Hills (1960) *Coordinator of Student Services*
B.A., Kansas; M.A., Ph.D., Iowa
- Mark H. Reece (1956) *Dean of Men*
B.S., Wake Forest
- Lu M. Leake (1964) *Dean of Women*
B.A., Louisiana State; M.R.E., Southern Baptist Seminary
- Edward R. Cunnings (1974) *Director of Housing*
B.S.M., M.Ed., St. Lawrence
- Michael Ford (1981) *Director of the College Union*
B.A., Wake Forest; M.Div., Gordon-Conwell Theological Seminary
- Edgar D. Christman (1956, 1961) *Chaplain*
B.A., J.D., Wake Forest; B.D., Southeastern Baptist Seminary;
S.T.M., Union Seminary
- Brian M. Austin (1975) *Director of the Center for Psychological Services*
B.A., Monmouth; M.S.Ed., Ph.D., Southern Illinois
- Marianne Schubert (1977) *Assistant Director of the Center for Psychological Services*
B.A., Dayton; M.A., Ph.D., Southern Illinois

Mary Ann H. Taylor (1961, 1978) *Director of University Student Health Service*
B.S., M.D., Wake Forest

Educational Planning and Placement

Toby A Hale (1970) *Assistant Dean and Director of Educational Planning and Placement*
B.A., Wake Forest; M.Div., Duke; Ed.D., Indiana

N. Rick Heatley (1979) *Associate in Academic Administration and Associate Director of Educational Planning and Placement*
B.A., Baylor; M.A., Ph.D., Texas

Records and Institutional Research

Ben M. Seelbinder (1959) *Director of Records and Institutional Research*
B.A., Mississippi Delta State; M.A., Ph.D., North Carolina (Chapel Hill)

Margaret R. Perry (1947) *Registrar*
B.S., South Carolina

Admissions and Financial Aid

William G. Starling (1958) *Director of Admissions and Financial Aid*
B.B.A., Wake Forest

Shirley P. Hamrick (1957) *Associate Director of Admissions*
B.A., North Carolina (Chapel Hill); M.A. in Ed., Wake Forest

W. Douglas Bland (1975) *Assistant Director of Admissions*
B.A., M.A. in Ed., Wake Forest

Lyne S. Gamble (1978) *Assistant Director of Admissions*
B.A., Millsaps

Karen A. Jaenke (1980) *Admissions and Financial Aid Counselor*
B.A., Wake Forest

Suzette Jordan (1981) *Admissions and Financial Aid Counselor*
B.A., Wake Forest

Personnel

James L. Ferrell (1975) *Director of Personnel*
B.A., North Carolina (Chapel Hill); M.S., Virginia Commonwealth

Communications and Publications

Russell H. Brantley Jr. (1953) *Assistant to the President and Director of Communication*
B.A., Wake Forest

Martha W. Lentz (1973) *University Publications Editor*
B.A., North Carolina (Chapel Hill); M.B.A., Wake Forest

Development and Alumni Activities

G. William Joyner Jr. (1969) *Vice President for Development*
B.A., Wake Forest

- Julius H. Corpening (1969) *Director of Development and Estate Planning*
B.A., Wake Forest; B.D., Southern Baptist Seminary
- Robert D. Mills (1972) *Director of Alumni Activities*
B.A., Wake Forest
- Robert T. Baker (1978) *Director of Corporate Relations and the Law Fund*
B.A., M.S., George Peabody
- Minta Aycock McNally (1978) *Director of the College Fund*
B.A., Wake Forest
- W. Craig Jackson (1978) *Assistant to the Director of Alumni Activities*
B.A., Wake Forest
- James Reid Morgan (1980) *Foundations Officer*
B.A., J.D., Wake Forest

Financial Affairs

- John G. Williard (1958) *Vice President and Treasurer*
B.S., North Carolina (Chapel Hill); C.P.A., North Carolina
- Carlos O. Holder (1969) *Controller and Assistant Treasurer*
B.B.A., Wake Forest
- W. Derald Hagen (1978) *Assistant Controller*
B.S., Virginia Polytechnic

Libraries

- Merrill G. Berthrong (1964) *Director of Libraries*
B.A., Tufts; M.A., Fletcher; Ph.D., Pennsylvania
- Richard J. Murdoch (1966) *Assistant to the Director and Curator of Rare Books*
B.A., Pennsylvania Military; M.S. in L.S., Villanova
- Kenneth A. Zick II (1975) *Director of Law Library Services*
B.A., Albion; J.D., Wayne State; M.L.S., Michigan
- Vivian L. Wilson (1960) *Librarian of the School of Law*
B.A., Coker; B.S. in L.S., George Peabody
- Sean B. Hopson (1970) *Librarian of the Babcock Graduate School of Management*
B.S. in Ed., Murray State; M.S. in L.S., George Peabody; M.B.A., Wake Forest
- Michael D. Sprinkle (1972) *Librarian of the Bowman Gray School of Medicine*
B.A., M.S. in L.S., North Carolina

Athletics

- Eugene Hooks (1956) *Director of Athletics*
B.S., Wake Forest; M.Ed., North Carolina; Ed.D., George Peabody
- Dorothy Casey (1949) *Director of Women's Athletics*
B.S., Woman's College, North Carolina; M.A., North Carolina (Chapel Hill)

Other Administrative Offices

Nicholas B. Bragg (1970) B.A., Wake Forest	<i>Executive Director of Reynolda House</i>
Richard T. Clay (1956) B.B.A., Wake Forest	<i>Director of University Store</i>
Thomas M. Elmore (1962) B.A., Wake Forest; M.A., George Peabody; Ph.D., Ohio State	<i>Director of Counselor Education</i>
Victor Faccinto (1978) B.A., M.A., California	<i>Director of the Art Gallery</i>
Larry R. Henson (1981) B.A., Berea; M.S., Missouri	<i>Director of Computer Center</i>
David B. Levy (1976) B.M., M.A., Ph.D., Eastman	<i>Director of Concert</i>
Rodney Meyer (1980) B.A., Brown; M.A., Ph.D., Minnesota	<i>Director of the Office for Grants and Contracts</i>
Harold S. Moore (1953) B.M.E., Virginia	<i>Director of the Physical Plant</i>
Herman J. Preseren (1953) B.S., California State (Pennsylvania); M.A., Columbia; Ph.D., North Carolina (Chapel Hill)	<i>Director of the Educational Media Center</i>
Henry B. Stokes (1977) B.A., Wake Forest; Th.B., Southern Baptist Seminary	<i>Director of Denominational Relations</i>
Harold C. Tedford (1965) B.A., Ouachita; M.A., Arkansas; Ph.D., Louisiana State	<i>Director of Theater</i>
Donald H. Wolfe (1968) B.S., M.S., Southern Illinois; Ph.D., Cornell	<i>Associate Director of Theater</i>



The art gallery in the Scales Fine Arts Center.

The Graduate Faculty

Date following name indicates year of appointment.

- Abraham Z. Ades (1979) *Assistant Professor of Biochemistry*
B.A., Ph.D., California (Los Angeles)
- Charles M. Allen (1941) *Professor of Biology*
B.S., M.A., Wake Forest; Ph.D., Duke
- Ralph D. Amen (1962) *Associate Professor of Biology*
B.A., M.A., Northern Colorado; M.B.S., Ph.D., Colorado
- John William Angell (1955) *Professor of Religion*
B.A., Wake Forest; Th.M., Southern Baptist Seminary;
S.T.M., Andover Newton; Th.D., Southern Baptist Seminary
- Dean N. Angelo (1977) *Assistant Professor of Pathology (Neuropathology);*
B.S., Simmons; M.D., Tufts *Associate in Neurology*
- Brian M. Austin (1975) *Lecturer in Psychology*
B.A., Monmouth; M.S.Ed., Ph.D., Southern Illinois
- H. Wallace Baird (1963) *Professor of Chemistry*
B.A., Berea; Ph.D., Wisconsin
- Eugene Pendleton Banks (1954) *Professor of Anthropology*
B.A., Furman; A.M., Ph.D., Harvard
- James P. Barefield (1963) *Associate Professor of History*
B.A., M.A., Rice; Ph.D., Johns Hopkins
- Alfred W. Barnes (1969) *Research Associate Professor of Neurology*
B.S.E.E., Duke; M.S.E., Pennsylvania; Ph.D., Duke *(Medical Sonics)*
- Richard Chambers Barnett (1961) *Professor of History*
B.A., Wake Forest; M.Ed., Ph.D., North Carolina (Chapel Hill)
- David A. Bass (1976) *Associate Professor of Medicine*
B.A., Yale; M.D., Johns Hopkins; *(Infectious Disease and Immunology)*
Ph.D., Oxford
- John V. Baxley (1968) *Professor of Mathematics*
B.S., M.S., Georgia Tech; Ph.D., Wisconsin
- Robert C. Beck (1959) *Professor of Psychology*
B.A., Ph.D., Illinois
- Paul A. Berberian (1979) *Assistant Professor of Anatomy*
B.A., Boston; Ph.D., Miami
- Merrill G. Berthrong (1964) *Associate Professor of History*
B.A., Tufts; M.A., Fletcher; Ph.D., Pennsylvania

**Absent on leave, 1981-82.*

- Deborah L. Best (1972) *Assistant Professor of Psychology*
B.A., Wake Forest University; Ph.D., University of North Carolina (Chapel Hill)
- David M. Biddulph (1970) *Associate Professor of Anatomy*
B.S., Utah; M.S., Ph.D., Illinois
- Ramunas Bigelis (1979) *Assistant Professor of Biology*
B.S., Illinois; Ph.D., Purdue
- David A. Blizzard (1980) *Associate Professor of Physiology*
B.A., Ph.D., Wales
- Walter J. Bo (1960) *Professor of Anatomy*
B.S., M.S., Marquette; Ph.D., Cincinnati
- M. Gene Bond (1974) *Assistant Professor of Comparative Medicine*
B.S., M.S., Ph.D., Ohio State *Associate in Anatomy and Neurology*
- William H. Boyce (1952) *Professor of Urology*
B.S., Davidson; M.D., Vanderbilt
- Robert W. Brehme (1959) *Professor of Physiology*
B.S., Roanoke; M.S., Ph.D., North Carolina (Chapel Hill)
- Alvin Brodish (1975) *Professor of Physiology*
B.A., Drake; M.S., Iowa; Ph.D., Yale
- Carole Lynn Browne (1980) *Assistant Professor of Biology*
B.S., Hartford; Ph.D., Syracuse
- Robert Albert Browne (1980) *Assistant Professor of Biology*
B.S., Dayton; Ph.D., Syracuse
- George McLeod Bryan (1956) *Professor of Religion*
B.A., M.A., Wake Forest; B.D., Ph.D., Yale
- Vardaman M. Buckalew Jr. (1973) *Professor of Medicine (Nephrology and Physiology)*
B.A., North Carolina (Chapel Hill); M.D., Pennsylvania
- Bill C. Bullock (1965) *Associate Professor of Comparative Medicine*
D.V.M., Texas A & M
- Jerry M. Burger (1980) *Assistant Professor of Psychology*
B.S. M.S., California State (Fresno); Ph.D., University of Missouri (Columbia)
- *Julian C. Burroughs Jr. (1958) *Professor of Speech Communication*
B.A., Wake Forest; M.A., Ph.D., Michigan
- Richard D. Carmichael (1971) *Professor of Mathematics*
B.S., Wake Forest; M.A., Ph.D., Duke
- John Archer Carter Jr. (1961) *Professor of English*
B.A., Virginia; M.A., Ph.D., Princeton
- David W. Catron (1963) *Associate Professor of Psychology*
B.A., Furman; Ph.D., George Peabody
- Maxine L. Clark (1980) *Assistant Professor of Psychology*
B.A., University of Cincinnati; A. M., Ph.D., University of Illinois

- Thomas B. Clarkson Jr. (1957) *Professor of Comparative Medicine*
D.V.M., Georgia
- John E. Collins (1970) *Associate Professor of Religion*
B.S., M.S., Tennessee; B.D., Southeastern Baptist Seminary; Ph.D., Princeton
- Wayne T. Corbett (1978) *Assistant Professor of Epidemiology*
B.S., Pennsylvania State; (Community Medicine)
V.M.D., Pennsylvania; M.P.H., Dr.P.H., Pittsburgh
- A. Robert Cordell (1957) *Professor of Surgery (Cardiothoracic);*
B.S., North Carolina (Chapel Hill); M.D., Johns Hopkins *Associate in Physiology*
- Nancy Cotton (1977) *Associate Professor of English*
B.A., Texas; M.A., Wisconsin; Ph.D., Columbia
- Cyclone Covey (1968) *Professor of History*
B.A., Ph.D., Stanford
- John R. Crouse III (1980) *Assistant Professor of Medicine*
B.A., Michigan; M.D., State (Endocrinology and General Medicine)
University of New York, Downstate Medical Center
- Carol C. Cunningham (1970) *Associate Professor of Biochemistry*
B.S., M.S., Oklahoma State; Ph.D., Illinois
- Patricia M. Cunningham (1978) *Assistant Professor of Education*
B.A., Rhode Island; M.S., Florida State; Ed. S., Indiana State; Ph.D., Georgia
- Ivan W. F. Davidson (1961) *Professor of Pharmacology;*
B.S., Manitoba; M.A., Ph.D., Toronto *Associate in Physiology*
- Samuel A. Deadwyler (1977) *Associate Professor of Physiology*
B.A., San Diego State; Ph.D., State University of New York (Stony Brook)
- Lawrence R. DeChatelet (1969) *Professor of Biochemistry;*
B.S., M.S., Ph.D., Loyola *Research Associate in Medicine*
- Donald V. Dimock Jr. (1970) *Associate Professor of Biology*
B.A., New Hampshire; M.S., Florida State; Ph.D., California
- William H. Dodge (1975) *Associate Professor (Experimental Medicine);*
B.S., Millsaps; M.S., Ph.D., Mississippi *Associate in Microbiology*
and Immunology
- George J. Doellgast (1976) *Associate Professor of Biochemistry;*
B.S., Fordham; B.S., Columbia; *Associate in Obstetrics and Gynecology*
Ph.D., Purdue
- Rome R. Dollard (1981) *Adjunct Professor of Religion*
B.A., St. Benedict's College; S.T.B., Belmont Abbey Seminary;
M.A., Ph.D., Catholic University of America
- Henry Drexler (1964) *Professor of Microbiology*
B.S., Pennsylvania State; Ph.D., Rochester
- Robert H. Dufort (1961) *Professor of Psychology*
B.A., Ph.D., Duke

Absent on leave, spring 1982.

- Claud E. Dunlap III (1979) *Assistant Professor of Pharmacology*
B.S., Ph.D., Florida
- Robert Allen Dyer (1956) *Professor of Religion*
B.A., Louisiana State; Th.M., Ph.D., Southern Baptist Seminary
- J. Charles Eldridge (1978) *Assistant Professor of Physiology and Pharmacology*
B.A., North Central; M.S., Northern Illinois;
Ph.D., Medical College of Georgia
- Thomas M. Elmore (1962) *Professor of Educational and Counseling Psychology*
B.A., Wake Forest; M.A., George Peabody; Ph.D., Ohio State
- Gerald W. Esch (1965) *Professor of Biology*
B.S., Colorado College; M.S., Ph.D., Oklahoma
- Andrew V. Ettin (1977) *Associate Professor of English*
B.A., Rutgers; M.A., Ph.D., Washington
- Herman E. Eure (1974) *Associate Professor of Biology*
B.S., Maryland State; Ph.D., Wake Forest
- David K. Evans (1966) *Associate Professor of Anthropology*
B.S., Tulane; Ph.D., California
- Donald L. Evans (1975) *Associate Professor of Microbiology and Immunology*
B.S., M.S., Missouri; Ph.D., Arkansas
- Philippe R. Falkenberg (1969) *Associate Professor of Psychology*
B.A., Queen's (Ontario); Ph.D., Duke
- Daniel J. Fernandes (1980) *Assistant Professor of Biochemistry*
B.S., Providence College; Ph.D. George Washington
- Walter S. Flory (1963-1980) *Babcock Professor Emeritus of Botany*
B.A., Sc.D., Bridgewater; M.A., Ph.D., Virginia
- Doyle Richard Fosso (1964) *Professor of English*
A.B., Harvard; M.A., Michigan; Ph.D., Harvard
- *Ivey C. Gentry (1949) *Professor of Mathematics*
B.S., Wake Forest; B.S., New York; M.A., Ph.D., Duke
- Balkrishna G. Gokhale (1960) *Professor of History and Asian Studies*
B.A., M.A., Ph.D., Bombay
- Harold O. Goodman (1958) *Professor of Medical Genetics (Pediatrics)*
B.A., M.A., Ph.D., Minnesota
Adjunct Professor of Biology
- Thomas Frank Gossett (1967) *Professor of English*
B.A., M.A., Southern Methodist; Ph.D., Minnesota
- Frank C. Greiss Jr. (1960) *Professor of Obstetrics and Gynecology*
B.A., M.D., Pennsylvania
- Paul M. Gross Jr., (1959) *Associate Professor of Chemistry*
B.S., Duke; Ph.D., Brown

*Absent on leave, spring 1982.

- Kenneth A. Gruber (1976)
B.A., Washington Square; Ph.D., New York
Research Associate Professor of Medicine (Nephrology)
- John P. Gusdon Jr. (1967)
B.A., M.D., Virginia
Professor of Obstetrics and Gynecology; Associate in Microbiology
- David W. Hadley (1966)
B.A., Wake Forest; A.M., Ph.D., Harvard
Associate Professor of History
- Emmett W. Hamrick (1952)
B.A., North Carolina (Chapel Hill); Ph.D., Duke
Professor of Religion
- Phillip J. Hamrick Jr. (1956)
B.S., Morris Harvey; Ph.D., Duke
Professor of Chemistry
- John W. Hartz (1974)
B.A., Albion; Ph.D., Wisconsin; M.D., Harvard
Assistant Professor of Pathology
- Isbrand Haven (1965)
Candidate, Doctorandus, Doctor, Groningen
Professor of Physics
- Immer K. Hayashi (1973)
B.A., California (Davis); M.S., San Diego State; Ph.D., Illinois
Associate Professor of Mathematics
- Michael D. Hazen (1974)
B.A., Seattle Pacific; M.A., Wake Forest; Ph.D., Kansas
Associate Professor of Speech Communication
- Roger A. Hegstrom (1969)
B.A., St. Olaf; A.M., Ph.D., Harvard
Professor of Chemistry
- Eugene R. Heise (1969)
B.S., Wittenberg; M.S., Iowa; Ph.D., Wake Forest
Associate Professor of Microbiology; Associate in Surgery
- Edwin Hendricks Jr. (1961)
B.A., Furman; M.A., Ph.D., Virginia
Professor of History
- Raig K. Henkel (1978)
B.S., Wheaton; Ph.D., Ohio State
Assistant Professor of Anatomy
- Nash Herndon (1942)
B.A., Duke; M.D., Jefferson
Professor of Medical Genetics
- David Allen Hills (1960)
B.A., Kansas; M.A., Ph.D., Iowa
Associate Professor of Psychology
- Willie L. Hinze (1975)
B.S., M.A., Sam Houston State; Ph.D., Texas A & M
Associate Professor of Chemistry
- Ed L. Horton Jr. (1970)
B.A., North Carolina (Chapel Hill); B.D., Union Seminary; Ph.D., Duke
Associate Professor of Religion
- William L. Hottinger (1970)
B.S., Slippery Rock; M.S., Ph.D., Illinois
Professor of Physical Education
- Edric T. Howard (1966)
B.A., M.A., Vanderbilt; Ph.D., Duke
Professor of Mathematics

*Absent on leave, spring 1982.

*Absent on leave, 1981-82.

- Frank H. Hulcher (1958) *Associate Professor of Biochemistry*
B.S., M.S., Ph.D., Virginia Polytechnic
- Carolyn C. Huntley (1957) *Professor of Pediatrics*
A.B., Mount Holyoke; M.D., Duke
- Phillip M. Hutchins (1970) *Professor of Physiology*
B.S., North Carolina State; M.S., Ph.D., Wake Forest
- Sarah E. Hutslar (1977) *Visiting Assistant Professor of Physical Education*
B.S., Ohio State; M.E., Miami (Ohio);
Ph.D., Ohio State
- Thomas H. Irving (1967) *Professor of Anesthesiology*
B.A., Pennsylvania State; M.D., Hahnemann
Associate in Pharmacology
- Charles F. Jackels (1977) *Assistant Professor of Chemistry*
B. Chem., Minnesota; Ph.D., Washington
- Susan C. Jackels (1977) *Assistant Professor of Chemistry*
B.A., Carleton; Ph.D., Washington
- Mordecai J. Jaffe (1980) *Babcock Professor of Botany*
B.S., City College of New York; Ph.D., Cornell
- Richard Janeway (1966) *Professor of Neurology*
B.A., Colgate; M.D., Pennsylvania
Research Associate in Radiology
- Joseph E. Johnson III (1972) *Professor of Medicine*
B.A., M.D., Vanderbilt
- W. Dillon Johnston (1973) *Associate Professor of English*
B.A., Vanderbilt; M.A., Columbia; Ph.D., Virginia
- Richard R. Marriott Jones (1980) *Assistant Professor of Chemistry*
B.S., Tennessee; Ph.D., California
Institute of Technology
- Jay R. Kaplan (1979) *Assistant Professor of Comparative Medicine*
B.A., Swarthmore; M.A., Ph.D., Northwestern
- John S. Kaufmann (1962, 1970) *Associate Professor of Medicine (Infectious Disease)*
B.S., M.D., Ph.D., Wake Forest
Associate Professor of Pharmacology
- Alonzo W. Kenion (1956) *Professor of English*
B.A., M.A., Ph.D., Duke
- William C. Kerr (1970) *Associate Professor of Physics*
B.S., Wooster; Ph.D., Cornell
- Bill A. Kilpatrick (1980) *Assistant Professor of Biochemistry*
B.S., Milligan; M.S., East Tennessee State;
Ph.D., North Carolina (Chapel Hill)
Associate in Microbiology and Immunology
- Ellen Kirkman (1975) *Associate Professor of Mathematics*
B.A., Wooster; M.A., M.S., Ph.D., Michigan State
- C. Jeffrey Kovacs (1981) *Associate Professor of Radiology (Radiobiology)*
B.S., Siena College;
M.S., Ph.D., St. John's
Associate in Microbiology and Immunology

- Arnold S. Kreger (1971) *Associate Professor of Microbiology*
B.S., Brooklyn; M.S., Ph.D., Michigan
- Wayne A. Krueger (1970) *Associate Professor of Anatomy*
B.S., M.S., John Carroll; Ph.D., Illinois
- Louis S. Kucera (1970) *Professor of Microbiology*
B.S., St. John's; M.S., Creighton; Ph.D., Missouri
- Raymond E. Kuhn (1968) *Professor of Biology*
B.S., Carson-Newman; Ph.D., Tennessee
- James Kuzmanovich (1972) *Associate Professor of Mathematics*
B.S., Rose Polytechnic; Ph.D., Wisconsin
- Philip W. Landfield (1979) *Assistant Professor of Physiology*
B.A., California (Berkeley); Ph.D., California (Irvine)
- Hugo C. Lane (1973) *Assistant Professor of Biology*
Licentiate of the Biological Sciences, Doctorate of the Biological Sciences, Geneva
- Joel D. M. Lehner (1966) *Associate Professor of Comparative Medicine*
B.S., D.V.M., Illinois; M.S., Wake Forest
- Elvin Levitt (1970) *Associate Professor of Physiology*
B.S., M.A., Roosevelt; Ph.D., Michigan State
- John C. Lewis (1977) *Associate Professor of Pathology*
B.S., M.S., Houston; Ph.D., Kansas
- John H. Litcher (1973) *Associate Professor of Education*
B.S., Winona State; M.A., Ph.D., Minnesota
- Law-Shung Liu (1978) *Associate Professor of Physiology*
D.D.S., Kaohsiung Medical College (Taiwan); M.S., Kentucky; Ph.D., Ottawa
- William B. Lorentz Jr. (1974) *Professor of Pediatrics*
B.A., West Virginia; M.D., Jefferson
- Samuel H. Love (1955) *Associate Professor of Microbiology*
B.A., Virginia; M.S., Miami (Ohio); Ph.D., Pennsylvania
- Robert W. Lovett (1962, 1968) *Associate Professor of English*
B.A., Oglethorpe; M.A., Ph.D., Emory
- Douglas S. Lyles (1978) *Assistant Professor of Microbiology and Immunology*
B.A., Pennsylvania; Ph.D., Mississippi
- John R. Lymangrover (1980) *Assistant Professor of Physiology*
B.S., Xavier; M.S., Kentucky; Ph.D., Cincinnati
- Charles E. McCall (1968) *Professor of Medicine (Infectious Disease); Associate in Physiology and Pharmacology*
B.S., M.D., Wake Forest
- James G. McCormick (1970) *Research Associate Professor of Otolaryngology (Physiological Acoustics)*
B.S., Bucknell; M.A., Ph.D., Princeton
- Charles E. McCreight (1954) *Associate Professor of Anatomy*
B.S., M.S., Ph.D., George Washington
- James C. McDonald (1960) *Professor of Biology*
B.A., Washington; M.A., Ph.D., Missouri

- James G. McDowell (1965) *Associate Professor of History*
B.A., Colgate; Ph.D., Johns Hopkins
- William M. McKinney (1963) *Professor of Neurology*
B.A., North Carolina (Chapel Hill); M.D., Virginia *Research Associate in Radiology*
- Mary Ruth McMahan (1974) *Assistant Professor of Pathology*
B.S., Stetson; M.A., Kansas; *Associate in Microbiology and Immunology*
Ph.D., Iowa State
- George Eric Matthews (1979) *Assistant Professor of Physics*
B.S., Ph.D., North Carolina (Chapel Hill)
- J. Gaylord May (1961) *Professor of Mathematics*
B.S., Wofford; M.A., Ph.D., Virginia
- W. Graham May (1961) *Professor of Mathematics*
B.S., Wofford; M.A., Ph.D., Virginia
- Jesse H. Meredith (1958) *Professor of Surgery*
B.A., Elon; M.D., Case Western Reserve
- Isadore Meschan (1955) *Professor of Radiology*
B.A., M.A., M.D., Case Western Reserve *Associate in Anatomy*
- Harry B. Miller (1947) *Professor of Chemistry*
B.S., Ph.D., North Carolina (Chapel Hill)
- Inglis J. Miller Jr. (1971) *Associate Professor of Anatomy*
B.S., Ohio State; Ph.D., Florida State
- Joseph O. Milner (1969) *Associate Professor of Education*
B.A., Davidson; M.A., Ph.D., North Carolina (Chapel Hill)
- Carlton T. Mitchell (1961) *Professor of Religion*
B.A., Wake Forest; B.D., Yale; S.T.M., Union Seminary; Ph.D., New York
- Edward J. Modest (1980) *Professor of Biochemistry*
A.B., A.M., Ph.D., Harvard
- Mariana Morris (1976) *Assistant Professor of Physiology*
B.A., Colorado; Ph.D., Texas (Dallas)
- William M. Moss (1971) *Associate Professor of Engineering*
B.A., Davidson; Ph.D., North Carolina (Chapel Hill)
- Thomas E. Mullen (1957) *Professor of History*
B.A., Rollins; M.A., Ph.D., Emory
- Richard T. Myers (1950) *Professor of Surgery*
B.A., North Carolina (Chapel Hill); M.D., Pennsylvania
- Quentin N. Myrvik (1963) *Professor of Microbiology*
B.S., M.S., Ph.D., Washington
- Linda Nielsen (1974) *Assistant Professor of Education*
B.A., Stetson; M.S., Ed.D., Tennessee
- Ronald E. Nofle (1967) *Professor of Chemistry*
B.S., New Hampshire; Ph.D., Washington

- John W. Nowell (1945) *Professor of Chemistry*
B.S., Wake Forest; M.S., Ph.D., North Carolina (Chapel Hill)
- A. Thomas Olive (1961) *Associate Professor of Biology*
B.S., Wake Forest; M.S., Ph.D., North Carolina State
- V. Keith O'Steen (1976) *Professor of Anatomy*
B.A., M.S., Emory; Ph.D., Duke
- Wallace Parce (1980) *Assistant Professor of Biochemistry*
B.A., Western Maryland; Ph.D., Wake Forest
- John E. Parker Jr. (1950) *Professor of Education and Romance Languages*
B.A., Wake Forest; M.A., Ph.D., Syracuse
- Larry A. Pearce (1969) *Associate Professor of Neurology;*
B.S., M.D., Wake Forest *Associate in Pharmacology*
- Percival Perry (1939, 1947) *Professor of History*
B.A., Wake Forest; M.A., Rutgers; Ph.D., Duke
- Darwin W. Peterson (1973) *Assistant Professor of Physiology*
B.S., M.S., Nevada; Ph.D., Alabama
- Elizabeth Phillips (1957) *Professor of English*
B.A., Woman's College, North Carolina; M.A., Iowa; Ph.D., Pennsylvania
- James R. Philp (1973) *Professor of Medicine (Infectious*
M.B., Ch.B., B.Sc., M.R.C.P., M.D., Edinburgh *Disease and Immunology)*
- Lee Harris Potter (1965) *Professor of English*
B.A., M.A., Ph.D., North Carolina (Chapel Hill)
- Norman J. Preseren (1953) *Professor of Education*
B.S., California State (Pennsylvania); M.A., Columbia;
Ph.D., North Carolina (Chapel Hill)
- Robert W. Prichard (1951) *Professor of Pathology*
M.D., George Washington
- Don Reeves (1967) *Professor of Education*
B.A., Mercer; B.D., Th.M., Southern Baptist Seminary; Ed.D., Columbia
- Walter Rejeski (1978) *Assistant Professor of Physical Education*
B.S., Norwich; M.A., Ph.D., Connecticut
- Charles N. Remy (1962) *Professor of Biochemistry*
B.S., Syracuse; Ph.D., New York Upstate Medical Center
- Paul M. Ribisl (1973) *Professor of Physical Education*
B.S., Pittsburgh; M.A., Kent State; Ph.D., Illinois
- Michael J. Ricardo Jr. (1981) *Assistant Professor of Microbiology*
B.S., Florida; M.A., South Florida; *and Immunology*
Ph.D., Georgia
- Stephen H. Richardson (1963) *Professor of Microbiology;*
B.A., California; M.S., Ph.D., Southern California *Adjunct Professor of Biology*
- Charles L. Richman (1968) *Professor of Psychology*
B.A., Virginia; M.S., Yeshiva; Ph.D., Cincinnati

- Ward A. Riley Jr. (1976) *Research Assistant Professor*
B.A., Kalamazoo College;
M.S., Michigan State; Ph.D., Southern Illinois
Neurology (Medical Sonics)
- Leonard P. Roberge (1974) *Assistant Professor of Education*
B.A., New Hampshire; M.A., Atlanta; Ed.D., Maine
- James C. Rose (1976) *Assistant Professor of Physiology*
B.S., Richmond; M.S., Ph.D.,
Medical College of Virginia *Associate in Obstetrics and Gynecology*
- Raymond C. Roy (1978) *Assistant Professor of Anesthesiology*
B.S., Pennsylvania; Ph.D., Duke; M.D., Tulane
- Paul Kevin Rudeen (1977) *Assistant Professor of Anatomy*
B.S., Utah State; Ph.D., Texas (San Antonio)
- Lawrence L. Rudel (1973) *Associate Professor of Comparative Medicine*
B.S., Colorado; M.S., Ph.D., Arkansas
Associate in Biochemistry
- Richard W. St. Clair (1967) *Professor of Pathology (Physiology)*
B.S., Ph.D., Colorado State
- John W. Sawyer (1956) *Professor of Mathematics*
B.A., M.A., Wake Forest; M.A., Ph.D., Missouri
- Harry M. Schey (1978) *Assistant Professor of Biostatistics*
B.S., Northwestern; A.M., Harvard; Ph.D., Illinois
- Ben M. Seelbinder (1959) *Professor of Mathematics*
B.A., Mississippi Delta State; M.A., Ph.D., North Carolina (Chapel Hill)
- V. Sagar Sethi (1977) *Research Associate Professor of Medicine (Hematology/Oncology)*
B.S., M.S., Banaras (India); *Associate in Microbiology and Immunology*
Ph.D., Munich
- Howard W. Shields (1958) *Professor of Physiology*
B.S., North Carolina (Chapel Hill); M.S., Pennsylvania; Ph.D., Duke
- Zakariya K. Shihabi (1972) *Associate Professor of Pathology*
B.S., Alexandria; M.S., Texas A & M; Ph.D., South Dakota
(Clinical Chemistry)
- Franklin R. Shirley (1948) *Professor of Speech Communication*
B.A., Georgetown College; M.A., Columbia; Ph.D., Florida
- Robert N. Shorter (1958) *Professor of English*
B.A., Union College; M.A., Ph.D., Duke
- N. Sheldon Skinner Jr. (1972) *Professor of Medicine (Cardiology) and Physiology*
B.S., Auburn; M.D., Alabama
- David L. Smiley (1950) *Professor of Histology*
B.A., M.A., Baylor; Ph.D., Wisconsin
- J. Howell Smith (1965) *Associate Professor of Histology*
B.A., Baylor; M.A., Tulane; Ph.D., Wisconsin
- Peter B. Smith (1976) *Associate Professor of Biochemistry*
B.S., Spring Hill; Ph.D., Tennessee
Associate in Neurology
- Cecilia Solano (1977) *Assistant Professor of Psychology*
B.A., Radcliffe; M.A., Ph.D., Johns Hopkins

- Blanche C. Speer (1972) *Associate Professor of English*
B.A., Howard Payne; M.A., Ph.D., Colorado
- Charles L. Spurr (1957) *Professor of Medicine (Hematology/Oncology)*
B.S., Bucknell; M.S., M.D., Rochester
- Jack W. Strandhoy (1973) *Associate Professor of Pharmacology*
B.S., Illinois; M.S., Ph.D., Iowa
- Cornelius F. Strittmatter IV (1961) *Professor of Biochemistry*
B.S., Juniata; Ph.D., Harvard
- Henry Smith Stroupe (1937) *Professor of History*
B.S., M.A., Wake Forest; Ph.D., Duke
- Edward H. Stullken Jr. (1978) *Assistant Professor of Anesthesia*
A.B., DePauw; M.D., Illinois
- Robert L. Sullivan (1962) *Professor of Biology*
B.A., Delaware; M.S., Ph.D., North Carolina State
- David K. Sundberg (1976) *Assistant Professor of Physiology*
B.S., Pacific Lutheran; Ph.D., Texas (Dallas)
- Charles H. Talbert (1963) *Professor of Religion*
B.A., Howard; B.D., Southern Baptist Seminary; Ph.D., Vanderbilt
- Harold C. Tedford (1965) *Professor of Theatre Arts*
B.A., Ouachita; M.A., Arkansas; Ph.D., Louisiana State
- Anton K. Tefft (1964) *Professor of Anthropology*
B.A., Michigan State; M.S., Wisconsin; Ph.D., Minnesota
- Michael J. Thomas (1980) *Assistant Professor of Biochemistry;
Research Associate in Medicine
(Infectious Disease)*
B.S., Indiana; Ph.D., California
- James F. Toole (1962) *Walter C. Teagle Professor of Neurology*
B.A., Princeton; M.D., Cornell; LL.B., LaSalle
- Alberto Trillo (1975) *Associate Professor of Pathology;
Associate in Comparative Medicine*
M.D., Mexico; Ph.D., Western Ontario
- James E. Turner (1974) *Associate Professor of Anatomy*
B.A., Virginia Military; M.S., Richmond; Ph.D., Tennessee
- Michael Tytell (1980) *Assistant Professor of Anatomy*
B.A., Queens (New York); M.S., Purdue;
Ph.D., Baylor College of Medicine
- Marcellus E. Waddill (1962) *Professor of Mathematics*
B.A., Hampden-Sydney; M.A., Ph.D., Pittsburgh
- William D. Wagner (1972) *Associate Professor of Comparative Medicine*
B.S., Geneva; M.S., Ph.D., West Virginia
- Joseph Waite (1967) *Professor of Biochemistry*
B.S., Rollins; Ph.D., Duke
- Benedict L. Wasilauskas (1971) *Associate Professor of Pathology
(Clinical Microbiology);
Associate in Microbiology*
B.S., Mount St. Mary's; Ph.D., Connecticut

- David S. Weaver (1977) *Assistant Professor of Anthropology*
B.A., M.A., Arizona; Ph.D., New Mexico
- Beverly Anne Weeks (1979) *Assistant Professor of Microbiology and Immunology*
B.A., Winthrop; Ph.D., North Carolina State
- Peter D. Weigl (1968) *Professor of Biology*
B.A., Williams; Ph.D., Duke
- J. Courtland White (1980) *Assistant Professor of Biochemistry*
B.A., Eastern; Ph.D., Virginia
- Alan J. Williams (1974) *Associate Professor of History*
B.A., Stanford; M. Phil., Ph.D., Yale
- George P. Williams Jr. (1958) *Professor of Physiology*
B.S., Richmond; M.S., Ph.D., North Carolina (Chapel Hill)
- John E. Williams (1959) *Professor of Psychology*
B.A., Richmond; M.A., Ph.D., Iowa
- Edwin Graves Wilson (1946, 1951) *Professor of English*
B.A., Wake Forest; A.M., Ph.D., Harvard
- Richard L. Witcofski (1961) *Professor of Radiology; Associate in Neurology*
B.S., Lynchburg; M.S., Vanderbilt; Ph.D., Wake Forest
- Donald H. Wolfe (1968) *Associate Professor of Theatre Arts*
B.S., M.S., Southern Illinois; Ph.D., Cornell
- Frank B. Wood (1975) *Adjunct Assistant Professor of Psychology; Associate Professor of Neurology and Psychiatry (Neuropsychology)*
B.A., M.A., Wake Forest; M. Div., Southeastern Baptist Seminary; Ph.D., Duke
- Ralph C. Wood Jr. (1971) *Associate Professor of Religion*
B.A., M.A., East Texas State; M.A., Ph.D., Chicago
- J. Ned Woodall (1969) *Associate Professor of Anthropology*
B.A., M.A., Texas; Ph.D., Southern Methodist
- Raymond L. Wyatt (1956) *Professor of Biology*
B.S., Wake Forest; M.A., Ph.D., North Carolina (Chapel Hill)
- Robert L. Wykle (1980) *Research Associate Professor of Biochemistry*
B.S., Western Carolina; Ph.D., University of Tennessee Center for the Health Sciences
- *W. Buck Yearns Jr. (1945) *Professor of History*
B.A., Duke; M.A., Georgia; Ph.D., North Carolina (Chapel Hill)
- Richard L. Zuber (1962) *Professor of History*
B.A., Appalachian; M.A., Emory; Ph.D., Duke

The Graduate Council

Provost of the University

Dean of the Graduate School, Chairman

Associate Dean for Biomedical Graduate Studies

Professor Richard C. Barnett (term expires 1983)

Professor John Archer Carter Jr. (term expires 1982)

Professor Michael D. Hazen (term expires 1984)

Professor Roger A. Hegstrom (term expires 1982)

Professor Louis Kucera (term expires 1984)

Professor Raymond E. Kuhn (term expires 1984)

Professor James Kuzmanovich (term expires 1983)

Professor Stephen H. Richardson (term expires 1983)

Professor Jack W. Strandhoy (term expires 1982)



John Williard, vice president and treasurer.

Bulletins of Wake Forest University

The College

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7305 Reynolda Station
Winston-Salem, North Carolina 27109
919-761-5201

The Graduate School

Dean of the Graduate School
7487 Reynolda Station
Winston-Salem, North Carolina 27109
919-761-5301

The School of Law

Director of Admissions
7206 Reynolda Station
Winston-Salem, North Carolina 27109
919-761-5437

The Babcock Graduate School of Management

Director of Admissions
7659 Reynolda Station
Winston-Salem, North Carolina 27109
919-761-5422

The Bowman Gray School of Medicine

Associate Dean for Admissions
300 Hawthorne Road
Winston-Salem, North Carolina 27103
919-727-4265

The Summer Session

Dean of the Summer Session
7293 Reynolda Station
Winston-Salem, North Carolina 27109
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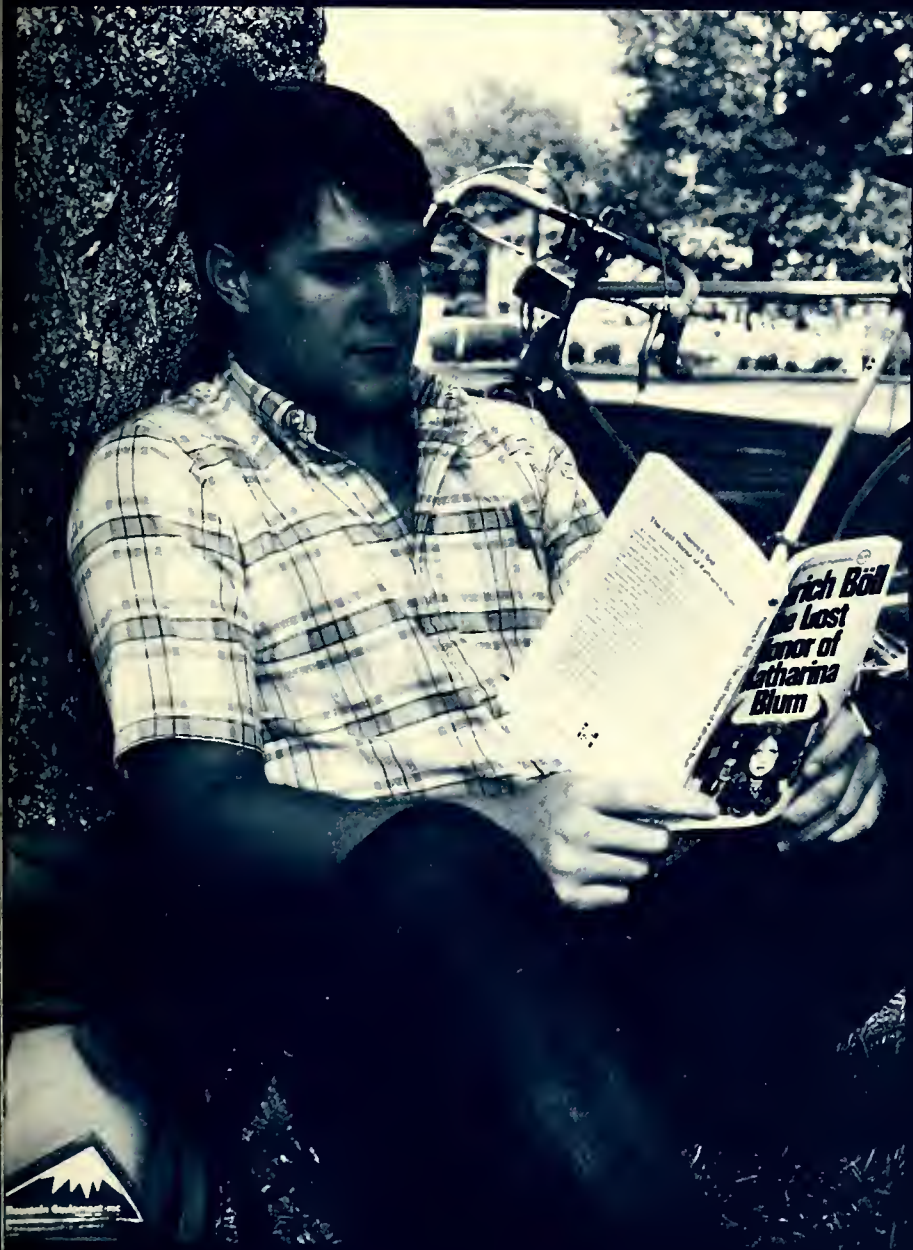
Marty Lentz, *University Editor*
Terry Hydell, *Assistant*

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Dean of the Graduate School
7487 Reynolda Station
Wake Forest University
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Wake Forest University



**Bulletin of the
Summer Session
1982**



Bulletin of the Wake Forest University Summer Session

Announcements for
1982

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The Calendar

First Term

May 26 – June 29, 1982

May	26	Wednesday	Undergraduate registration, 9:00 a.m.–12 noon 110 Reynolda Hall Graduate registration, 9:00 a.m.–12:00 noon 210 Reynolda Hall Classes begin in the afternoon
May	29	Saturday	Classes meet
May	31	Monday	Last day for late registration
June	1	Tuesday	Last day for dropping a class without penalty Last day for withdrawal with pro rata refund
June	12	Saturday	Classes meet
June	26	Saturday	Classes meet
June	28	Monday	Final examinations begin
June	29	Tuesday	Final examinations end

Second Term

July 1 – August 6, 1982

July	1	Thursday	Undergraduate registration, 9:00 a.m.–12 noon 110 Reynolda Hall Graduate registration, 9:00 a.m.–12:00 noon 210 Reynolda Hall Classes begin in the afternoon
July	3	Saturday	Holiday
July	7	Wednesday	Last day for late registration
July	8	Thursday	Last day for dropping a class without penalty Last day for withdrawal with pro rata refund
July	10	Saturday	Classes meet
August	5	Thursday	Final examinations begin
August	6	Friday	Final examinations end



Special Programs May 26–August 6, 1982

May 13–June 10	Swiss French Civilization
May 30–June 4	Baptist Summer Mission Training Program
June 6–June 16	Holy Land Tour
June 13–June 19	American Legion Boys' State
June 13–June 26	Golf Camp for Boys (First Session)
June 13–July 3	Golf Camp for Boys (Super Session I)
June 14–June 23	American College of Sports Medicine Workshop
June 24–June 25	American College of Sports Medicine Certification Session
June 14–July 2	Learning to Learn for High School Students
June 14–July 5	Anthropological Field Project in Honduras
June 18–June 19	Marching Band Workshop for High School Band Directors
June 20–July 9	High School Athletic Trainers
June 20–June 26	Tennis Camp (First Session)
June 21–July 17	Program for Teachers on Teaching the Gifted (First Session)
June 21–July 30	American Foundations Interdisciplinary Program in History, Literature, Art, and Music
June 21–July 2	Wake Forest Sports Camp (First Session)
June 28–July 3	Debate Workshop for High School Debate Coaches
June 28–July 18	Debate Workshop for High School Students
June 27–July 2	Tennis Camp (Second Session)
June 27–July 2	Lady Deacons Basketball Camp (First Session)
June 27–June 30	Marching Auxiliaries of America
July 1–August 3	Field Research in Biblical Archeology in Caesarea
July 4–July 9	Tennis Camp (Third Session)
July 4–July 9	Lady Deacons Basketball Camp (Second Session)
July 5–July 16	Wake Forest Sports Camp (Second Session)
July 5–July 17	Golf Camp for Boys (Second Session)
July 5–July 24	Golf Camp for Boys (Super Session II)
July 5–Aug. 13	Archeological Field Study in Yadkin County, North Carolina
July 6–July 23	Learning to Learn for High School Students (Second Session)
July 11–July 15	Wake Forest Cheerleaders Clinic (First Session)
July 11–July 16	Basketball Camp for Boys (First Session)
July 11–July 17	Spiritual Frontiers Fellowship
July 12–July 16	Pastors Conference
July 15–July 18	Order of the Arrow, Boy Scouts of America
July 18–July 23	Basketball Camp for Boys (Second Session)
July 18–July 25	Wake Forest Cheerleaders Clinic (Second Session)
July 19–Aug. 14	Program for Teachers on Teaching the Gifted (Second Session)
July 25–July 30	Basketball Camp for Boys (Third Session)



The Reynolda Campus

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The University

Wake Forest University is characterized by its devotion to liberal arts learning and professional preparation for men and women, its strong sense of community and fellowship, and its encouragement of free inquiry and expression.

Founded in 1834 by the Baptist State Convention of North Carolina, the school opened its doors to students on February 3 as Wake Forest Institute, with Samuel Wait as principal. It was located in the Forest of Wake County, North Carolina, on the plantation of Dr. Calvin Jones, near which the Village of Wake Forest later developed.

Rechartered in 1838 as Wake Forest College, it is one of the oldest institutions of higher learning in the state. It was exclusively a college of liberal arts for men until 1894, when the School of Law was established. The School of Medicine, founded in 1902, offered a two-year medical program until 1941. In that year the School was moved from the Town of Wake Forest to Winston-Salem, became associated with the North Carolina Baptist Hospital, and was renamed the Bowman Gray School of Medicine in honor of the benefactor who made possible the move and expansion to a full four-year program. In 1942 Wake Forest admitted women as regular undergraduate students.

A School of Business Administration was established in 1948 and for over two decades offered an undergraduate program of study in business. In 1969 the Babcock Graduate School of Management was formed and the professional program for undergraduates was phased out. In 1980 the undergraduate program in business and accountancy was reconstituted as the undergraduate School of Business and Accountancy. The Division of Graduate Studies was established in 1961. It is now organized as the Graduate School and encompasses advanced work in the arts and sciences on both the Reynolda and Hawthorne Campuses in Winston-Salem. The summer session was inaugurated in 1921.

In 1946 the Trustees of Wake Forest College and the Baptist State Convention of North Carolina accepted a proposal by the Z. Smith Reynolds Foundation to relocate the non-medical divisions of the College in Winston-Salem, where the School of Medicine was already established. The late Charles H. Babcock and his wife, the late Mary Reynolds Babcock, contributed a campus site, and building funds were received from many sources. Between 1952 and 1956 the first fourteen buildings were erected in Georgian style on the new Winston-Salem campus. In 1956 the College moved all operations, leaving the 122-year-old campus in the Town of Wake Forest to the Southeastern Baptist Theological Seminary.

The decade that followed was the College's most expansive, and in 1967 its augmented character was recognized by the change in name to Wake Forest University. Today enrollment in all schools of the University stands at over 4,700. Governance remains in the hands of the Board of Trustees, and development for each of the five schools of the University is augmented by Boards of Visitors for the undergraduate schools and Graduate School, the School of Law, the Graduate School of Management, and the School of Medicine. A joint board of University Trustees and Trustees of the North Carolina Baptist Hospital is responsible for the Medical Center, which includes the hospital and the School of Medicine. Alumni and parents' organizations are also active at Wake Forest, and support by the Z. Smith Reynolds Foundation and other foundations and corporations is strong and continuing.

Wake Forest's relationship with the Baptist State Convention is an important part of the school's heritage. Wake Forest's founders proposed to establish an institution that would provide education under Christian influences. The basis for the continuing relationship between the University and the Convention is a mutually agreed-upon covenant which grows out of a commitment to God and to each other. The covenant expresses the Convention's deep interest in Christian higher education and the University's desire to serve the denomination as one of its constituencies. Wake Forest receives financial and intangible support from Convention-affiliated churches.

The undergraduate schools, Graduate School, School of Law, and Graduate School of Management are located on the Reynolda Campus in northwest Winston-Salem. The Bowman Gray School of Medicine is about four miles away, near the city's downtown on what is known as the Hawthorne Campus. The University also offers instruction regularly at Casa Artom in Venice, at Worrell House in London, and in other places around the world.

The undergraduate faculties offer courses of study leading to the baccalaureate in thirty departments and interdisciplinary areas. The School of Law offers the Juris Doctor and the Graduate School of Management the Master of Business Administration degree. In addition to the Doctor of Medicine degree, the School of Medicine offers through the Graduate School programs leading to the Master of Science and Doctor of Philosophy degrees in the basic medical sciences. The Graduate School confers the Master of Arts, Master of Arts in Education, and Master of Science degrees in the arts and sciences and the Doctor of Philosophy degree in biology and chemistry.

Libraries

The libraries of Wake Forest University support research in undergraduate education and in each of the disciplines in which a graduate degree is offered. An endowment provided by a substantial gift from the Mary Reynolds Babcock Foundation and another from Nancy Reynolds has been assigned to the sustained expansion and development of library resources, especially to support the graduate program. The libraries of the University hold membership in the Association of Southeastern Research Libraries.

The library collections total 818,711 volumes. Of these, 624,367 constitute the general collection in the Z. Smith Reynolds Library, 83,112 are housed in the School of Law, 98,761 in the library of the Bowman Gray School of Medicine, and 12,471 in a relatively new library in the Babcock Graduate School of Management. Subscriptions to 9,989 periodicals and serials, largely of scholarly content, are maintained by the four libraries of the University. The holdings of the Z. Smith Reynolds Library also include 24,057 reels of microfilm, 265,303 pieces of microcards, microprint, and microfiche, and 77,045 volumes of United States government publications.

Special collections cover the works of selected late nineteenth and early twentieth century English and American writers, with pertinent critical material, a Mark Twain Collection, a Gertrude Stein Collection, and the Ethel Taylor Crittenden Collection in Baptist History. The acquisition of the Charles H. Babcock Collection of Rare and Fine Books represents an important addition to the resources of the Z. Smith Reynolds Library.

The library instructional program includes an orientation workshop in research methods, assistance in independent and directed studies, and bibliographic presentations as requested by faculty.

Recognition and Accreditation

Wake Forest University is a member of the Southern Association of Colleges and Schools, the Southern Universities Conference, the Association of American Colleges, the Conference of Southern Graduate Schools, and the Council of Graduate Schools in the United States. The University has chapters of the principal national social fraternities, professional fraternities, and honor societies, including Phi Beta Kappa and Sigma Xi. The Bowman Gray School of Medicine is a member of the Association of American Medical Colleges and is on the approved list of the Council on Medical Education of the American Medical Association. The program in counseling leading to the Master of Arts in Education degree is accredited by the National Council for the Accreditation of Teacher Education.

Wake Forest College was accredited by the Southern Association of Colleges and Schools in 1921. The reaccreditation of 1965 included the master's and doctoral degree programs in the Division of Graduate Studies. Accreditation was reaffirmed in December 1975.



Samuel Wait, a founder and the first president (1834–1845)

The Summer Session

The 1982 summer session offers two five-week terms, with the option of taking one or more courses for a maximum of eight credits per term. A maximum credit load in both terms is equivalent to a full semester's work.

Most of the basic courses required for the bachelor's degree are offered, with a variety of advanced and elective graduate courses. Some special and unusual courses are designed to explore new avenues of learning beyond the traditional order. The course in *Learning to Learn*, available on campus on a non-credit basis, is a beginner's step in the approach to higher education. Regular college courses explore the *Fundamentals of Human Motivation*, deal with the mind in *Altered States of Consciousness*, and offer help through the study of *Neuropsychology and Learning Disabilities*.

All of the basic science courses required for a bachelor's degree are available, and the



mathematics curriculum includes courses in finite mathematics, calculus, probability, and computer programming.

Courses in business and accountancy provide opportunities in three stages of accounting, beginning, intermediate, and cost accounting, as well as courses in financial management, quantitative methods, and the psychology of business and industry.

In addition to an interdisciplinary course called *American Foundations*, the Department of History offers courses in American history, Civil War and Reconstruction, Western civilization, modern Europe, modern China, and that region of vital concern to all people in today's world, the Middle East. The Department of Politics supplements these offerings with a course which analyzes the American political system and another which compares the major political systems in the world today.

Courses in English include surveys of British and American literature and a variety of advanced courses which range from a study of old English language from the time of *Beowulf*, through the Renaissance Era, and the seventeenth century, to a comparison of the fiction of Nathaniel Hawthorne and Henry James in the nineteenth century.

In foreign languages, courses range from beginning, to intermediate, to advanced courses in both Spanish and French. Additional courses in translation are available in the literature of foreign countries, including courses in Greek literature, Romance literature, and German and Slavic literature. For students eager to acquire facility in spoken French, the summer session offers an opportunity to spend a month living with a French Swiss family in Switzerland.

Advanced courses in anthropology and sociology include a field trip to Honduras, and an archeological excavation of a prehistoric site in Yadkin County, North Carolina. On campus, there are courses in marriage and the family, photography in the social sciences, and a study of criminology in American society.

For students interested in religion and philosophy, there are basic courses in each, and in religion there are two opportunities for study abroad. One is an archeological field trip to excavate a site in Caesarea, and the other is a tour of the Mediterranean World with a focus on the Holy Lands of the Middle East.

On the graduate level, courses are offered leading to the Master of Arts degree in education, English, history, physical education, psychology, and speech communication. In education particularly there is a spectrum of graduate courses for teachers interested in beginning or continuing work on the Master of Arts in Education degree. Fields of specialization are counseling and psychometry, as well as the major teaching areas.

There is a variety of special programs for teachers and graduate students. The Department of History is continuing its special summer interdisciplinary program, *American Foundations*, for graduates and public school teachers in the fields of history, art, literature, and music. *American Foundations* is co-sponsored with Reynolda House and includes visits to local historic sites as well as a week's trip to New York. The Department of Education is offering two special terms for teachers with courses focusing on teaching gifted children. All of the field trips in anthropology and religion may be pursued on the graduate level. The Department of Physical Education is continuing its special graduate program in the summer which offers training in the field of biomechanics and graded exercise testing, as well as a workshop offered in the summer by the American College of Sports Medicine.

High school students can find opportunities in the summer session of 1982 in the *Learning to Learn Program*, the Debate Workshop, American Legion Boys' State, the Order of the Arrow, the Sports Camp, and the basketball, golf, soccer, tennis, and cheerleaders camps.

The 1982 summer session is designed to meet the needs of the following:

Undergraduates in the University who want to accelerate their education and to obtain the bachelor's degree in less than four years.

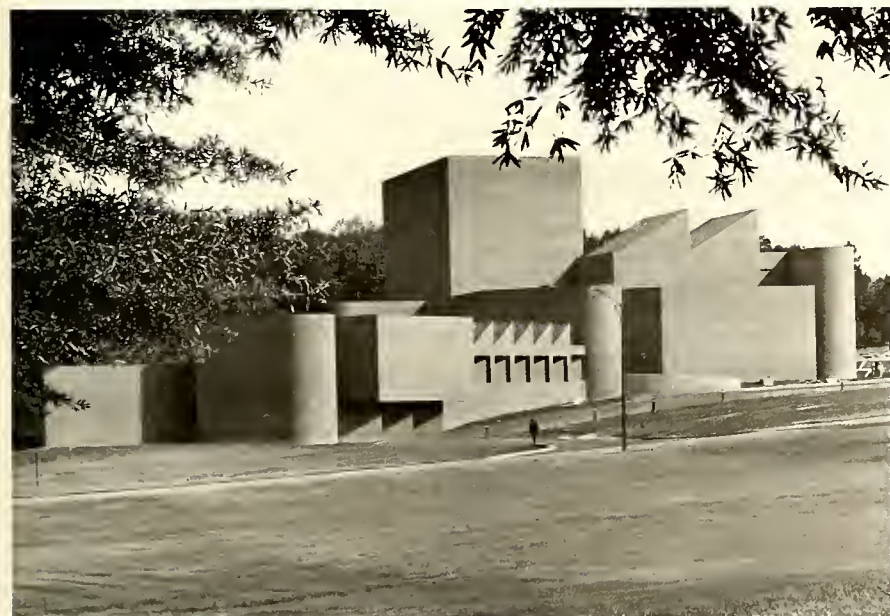
Incoming freshmen who plan to complete requirements for the bachelor's degree in less than four years or who want to gain experience before beginning a full academic program in the fall semester.

Undergraduate students from other colleges and universities who wish to attend the summer session only and need to take particular courses.

Public school teachers and administrators who need courses leading to the issuance or renewal of certificates, or who wish to begin a program of graduate study leading to the Master of Arts in Education degree.

Students with the bachelor's degree who desire to begin work on a master's degree in biology, chemistry, education, English, history, mathematics, physical education, physics, psychology, religion, or speech communication and theatre arts.

The summer session is an integral part of the school year, and the various facilities of the University are available then as in the fall and spring. The continuation of high standards of academic work is assured by the fact that, with few exceptions, instructors are selected from the professorial ranks of the regular faculty.



The James R. Scales Fine Arts Center

Procedures

All students are responsible for familiarizing themselves with academic, housing, traffic, and other regulations. Students are expected to abide by these regulations while enrolled at the University.

Undergraduate Admission

Admission to the summer session does not constitute admission to the fall or spring semester.

Students who plan to attend the University in the summer session only should use the summer session application form provided by the Dean of the Summer Session. Students who come under this classification are (1) temporary visiting students from other colleges or universities, who must present a written statement that they are currently in satisfactory academic and social standing at their college or university and have permission to take courses at Wake Forest in the summer session as indicated on the application form; (2) teachers desiring courses leading to issuance or renewal of the A or G public school certificates; (3) high school graduates who plan to enroll in another college or university in the fall semester, and who must present a written statement of graduation from their respective high schools or have approval to attend the University summer session from the dean or registrar of the college or university at which they have been accepted for the fall semester.

Students who plan to begin in the summer session and continue at the University in the fall semester should apply for admission to the Director of Admissions, indicating on their application the intention to attend both the summer session and the fall semester. Students who come under this classification are (1) *incoming* freshmen and (2) *permanent* transfer students from other colleges and universities.

Students who have attended the University but who are not now in residence must apply for readmission to the Director of Admissions before they can enroll for the summer session.

Students who are attending the University in the spring semester and who plan to attend the summer session should indicate their intention by signing and returning the summer session reservation card mailed to their home address in April, or they should sign a card in the Registrar's Office, 110 Reynolda Hall.

Graduate Admission

Students who begin in the summer session programs of study leading to the Master of Arts, Master of Science, Master of Arts in Education, or Doctor of Philosophy degree must be admitted to the Graduate School according to the procedures of the bulletin of the Graduate School. Bulletins and application forms are available from the Dean of the Graduate School.

Students who are currently enrolled and who plan to attend the summer session should make arrangements in the Office of the Dean of the Graduate School.

Students who plan to apply for one of twenty tuition scholarships available in the summer session should make arrangements in the Office of the Dean of the Graduate School.

Students who do not plan to pursue programs of study leading to the master's degree and students who already hold a graduate degree may be admitted to the summer session as unclassified graduate students and may take courses for which they meet prerequisites at the 300 and 400 levels. Unclassified graduate students are not regarded as candidates for degrees. Subject to approval of the department concerned, courses completed by unclassified students may be applied toward the master's degree if the student is subsequently accepted as a candidate for a master's degree. Unclassified graduate students must (1) complete the application for admission, health form, and demographic form provided by the Dean of the Summer Session, (2) present a letter of recommendation, and (3) present an official transcript of undergraduate work from the college or university from which they graduated. Unclassified graduate students should make arrangements in the Office of the Dean of the Summer Session.

Students who plan to participate in the American Foundations Program at Reynolda House as unclassified graduate students seeking graduate credit must (1) complete the special application form, (2) present two letters of recommendation, and (3) present an official transcript of undergraduate work from the college or university from which they graduated.

Health Certification

All students who attend the summer session or special summer programs must complete the health form for the University Health Service. Residents of Winston-Salem who have their own physician must complete only the medical history section of the form. Immunization information is not required, but all health forms must be signed authorizing treatment in case of emergency.

Admission of Handicapped Students

Wake Forest University will consider the application of any student on the basis of his or her academic and personal merit, regardless of physical handicap. Though the campus is built on many levels, a system of ramps and elevators makes each building accessible to those in wheelchairs or with limited mobility. The University will gladly assist handicapped students in making arrangements to meet special needs. Students who seek further information should consult the Dean of the Summer Session or the University's Office of Equal Opportunity.

Room Charges

Double room (each person) per five-week term **\$130.00**

Room charges must be paid in full for the entire term at the time of registration. A residence hall key deposit of \$5.00 is required of all residential students. This deposit should be paid at check-in.

Tuition and Fees

	Full-Time Students	Part-Time Students
<i>Undergraduate</i>		
Tuition	\$52.50 per credit	\$52.50 per credit
Audit Fee	\$30.00 per course	\$30.00 per course
<i>Graduate</i>		
Tuition	\$60.00 per hour	\$60.00 per hour
Audit Fee	\$30.00 per course	\$30.00 per course
<i>Vehicle Registration Fee</i>		
Automobile	\$ 6.00 per term	\$ 6.00 per term
Motorcycle, etc.	\$ 2.00 per term	\$ 2.00 per term

Each student driving an automobile or other propelled vehicle to the campus is required to register it at the University Department of Public Safety on the same day the student registers for courses. Automobile and motorcycle registration fees are not refundable.

All tuition and fees are due and payable in advance from currently enrolled University students. Students from other colleges and universities may pay tuition and room rent at registration. Meals from the University food service average \$35.00 – \$45.00 per week.

Withdrawal and Refund Policy

During the summer session all students may receive tuition refunds according to the following schedule. This policy applies to students dropping individual courses as well as to those withdrawing from the summer session.

First Session		Second Session		Tuition	Housing
<i>Friday</i>	<i>May 28</i>	<i>Monday</i>	<i>July 5</i>	100%	<i>All except \$10</i>
<i>Saturday</i>	<i>May 29</i>	<i>Tuesday</i>	<i>July 6</i>	75%	75%
<i>Monday</i>	<i>May 31</i>	<i>Wednesday</i>	<i>July 7</i>	50%	50%
<i>Tuesday</i>	<i>June 1</i>	<i>Thursday</i>	<i>July 8</i>	25%	25%

After June 1 for the first session and July 8 for the second session, no refund will be made.

Financial Aid

Because summer session tuition charges are reduced for all students to less than one-half the amount charged for tuition in the regular academic year, it is not possible to provide additional scholarships for a large number of students. However, a limited number of partial scholarships are available to in-service public or private school

teachers enrolling for undergraduate credit. Letters of application should be addressed to the Dean of the Summer Session.

Employment Opportunities

Opportunities for student employment in the summer session are limited to a few positions in the library and the cafeteria. These are frequently preempted by regular students who plan to attend the summer session and make arrangements in advance for employment. The academic program is accelerated in the summer, and students should not seek outside employment unless necessary. Students desiring part-time employment should consult the Office of Educational Planning and Placement.

Veteran Benefits

The University has enrolled a number of students who are veterans. Students who need information concerning education benefits for veterans should consult the Treasurer or the nearest regional office of the Veterans Administration. The office for North Carolina is located in the Federal Building at 251 North Main Street in downtown Winston-Salem.

Housing Services and Regulations

Mary Reynolds Babcock Dormitory is an air conditioned residence hall which is used during the summer session. All registered undergraduate students, including freshmen — who are required to live on campus — are accommodated here. By accepting a room assignment, students agree to abide by the room contract and by the regulations stipulated in this bulletin and in the constitution of the student body. Local students or freshmen with approval from the Dean of the Summer Session may live off campus.

Check-in at Babcock is Tuesday, May 25 for the first session and Wednesday, June 30 for the second session between 12:00 noon and 5:00 p.m. A \$25.00 refundable key/damage deposit is required at that time.

Room assignments are made by the Summer Resident Director on a first come first served basis. All double rooms are assigned to two students, beginning with the lower floors. Students desiring to room together must check in together. There are a limited number of single rooms which are assigned at the discretion of the Summer Resident Director.

Room changes and reassignment are allowed during the first two days of the session, but only with the prior written approval of the Summer Resident Director. The Director reserves the right to reassign students for disciplinary reasons or to ensure double occupancy and the efficient use of residence hall space. Students remaining for the second session must indicate this intent at check-in and confirm their plans prior to the end of the first session.

Check-out is required regardless of when a student leaves the session. It includes the following: (a) removal of all personal property, (b) deposit of refuse in the appropriate

containers in hallways, (c) completion of the room condition report, (d) closing and locking all windows and doors, and (e) return of the room key to a staff member. **THERE IS A \$25.00 FINE FOR FAILURE TO COMPLETE THE CHECKOUT PROCEDURE**, which must be completed by 6:00 p.m. the last day of the session.

Babcock facilities include lounges, a study area, a kitchen, storage areas, and laundry facilities. They are provided for the exclusive use of Babcock residents. A guest policy is outlined at check-in and during a residence hall meeting the first full day of each session.

Furnishings and equipment are not to be moved from rooms and are not to be used for other than their intended purpose.

The rooms are furnished with single beds, desks, chairs, dressers, and closets. Students must supply their own linen, pillows, desk lamps, and wastebaskets. Molding is provided on the walls for hanging pictures, pennants, and posters, which are not to be affixed to the walls or ceilings.

Curtains or drapes must be suspended by temporary spring-type rods with cushioned ends. Window screens must be left on the windows, and trunks or heavy luggage must be stored in trunk rooms. Waterbeds are not allowed. The University accepts no responsibility for students' personal property.

Babcock is a coeducational residence hall with separate wings for men and women. Students are not allowed in the rooms assigned to members of the opposite sex except during hours approved by the Summer Resident Director in accordance with established guidelines.

After the residence hall is closed for the night, students must enter by the center front door, where proper identification must be shown to the guard on duty. Students who are involved in incidents which jeopardize the safety or security or well being of the students living in the residence hall or other University property forfeit the opportunity to continue living in the residence hall, lose all fees, and become subject to disciplinary action.

Students are expected to cooperate with campus guards and residence hall staff members by providing proper identification upon request. Failure to do so is considered serious misconduct.

In order to provide an opportunity for responsible living and learning in a safe and comfortable environment, the following regulations have been adopted:

(1) Cooking and ironing are not permitted in rooms and must be done in the kitchen or laundry.

(2) Electrical appliances, other than thermostatically controlled coffee pots and small refrigerators (1.5 amp., five cubic feet maximum) are not allowed.

(3) Musical appliances and hair dryers are authorized, but if it becomes apparent that electrical circuits are overloaded, remedial measures — including limitation of electrical service — must be taken.

(4) Indecent exposure, illicit sexual activity, and public use of vulgar or abusive language are prohibited.

(5) Students are subject to all state and local regulations concerning the use of alcoholic beverages. Public consumption or display of alcoholic liquors, wines, or beer in the residence hall or elsewhere on campus is prohibited.

(6) Alcohol abuse, including intoxication, is not tolerated. Behavior resulting from such abuse results in loss of housing privileges and disciplinary action.

(7) Possession or use of illegal drugs (LSD and marijuana, for example), and drug paraphernalia is prohibited. Students involved in the use, possession, distribution, or transportation of illegal drugs or contraband on or off campus must vacate the residence hall within forty-eight hours and are subject to disciplinary action, which may include dismissal from the University. Parents of such students are notified promptly.

(8) Deadly weapons are prohibited everywhere on campus except in the Department of Military Science and as authorized by the University Department of Public Safety.

(9) Animals are not allowed in the residence halls.

(10) Use or possession of fireworks and other pyrotechnics is prohibited in the residence halls and elsewhere on campus.

(11) Playing sports in the residence hall areas is prohibited. Ample playing fields are provided close to the residence halls.

(12) Rooms in the residence halls cannot be used as sales offices or storerooms or for solicitation of sales or gifts without prior written permission of the Dean of Men.

(13) No aerials of any kind may be installed on any University building (including window sills) without prior written permission of the Director of the Physical Plant.

(14) Students are expected to refrain from making excessive noise either in person or with sound equipment such as musical instruments or stereos.

Failure to comply with these regulations or the instructions of the Summer Resident Director can result in forfeiture of housing privileges and fees. Students removed from the residence halls relinquish all rights to further use of the facilities regardless of rental fees which may have been paid.

Any questions regarding these regulations or summer housing in general should be addressed to the Director of Housing, 7342 Reynolda Station, Winston-Salem, N.C. 27109.

Student Services

Food Services. A cafeteria and a soda shop are located in Reynolda Hall, serving meals during the day and snacks at night.

Laundry Service. Laundry is arranged for privately. Coin-operated washers and dryers are located in residence halls and are not available to non-resident students.

Health Service. The Health Service is located in Kitchin House for students who become ill. The Center for Psychological Services assists students with personal adjustment problems.

Educational Planning and Placement. Students seeking part-time summer employment should consult the Office for Educational Planning and Placement. Both this office and the Center for Psychological Services assist students with educational and vocational problems. Persons planning to find employment upon their graduation at the end of the summer session should register early with this office.

Recreational Activities. The University maintains athletic fields, tennis courts, and athletic, physical education, and recreation facilities which include a swimming pool, handball and squash courts, basketball floors, a dance studio, recreational areas, and gymnastics and wrestling rooms. The Department of Physical Education sponsors an intramural program of tournaments and organized club activities in tennis, golf, racquetball, and other sports for men and women. Student golfers may take advantage of two

public courses, Winston Lake and Reynolds Park. Other golf courses are available at Grandview, Wedgewood, Wilshire, Tanglewood Park, and Hillcrest Golf Clubs. Students can find swimming, golf, horseback riding, fishing, picnicking, and games at Tanglewood Park.

Historic Old Salem, the Museum of Early Southern Decorative Arts, the Wachovia Historical Society Museum, the Southeastern Center for Contemporary Art, Reynolda House, the Museum of Man, the Nature Science Center, numerous industries, and the nearby mountains are of interest to those who attend the summer session. Pilot Mountain and Hanging Rock state parks are approximately thirty miles north of Winston-Salem. Blowing Rock on the Blue Ridge Parkway, about a two-hour drive, is a well known summer resort and features a variety of summer recreational activities.

Free movies are shown regularly during the summer session.

Religious Activities. Religious programs supplement the summer schedule. The Office of the Chaplain welcomes the opportunity to identify churches in the community and give any help it can to summer session students. Wake Forest Baptist Church holds worship services each Sunday at 11:00 a.m. in Wait Chapel. A special series of worship services is scheduled each evening during the Ministers' Conference, July 12-16, in Davis Chapel. Students and faculty are invited to attend.

Vehicle Regulations

Automobiles must be registered with the University Department of Public Safety on *the same day that the student registers for courses*. Registration is not considered complete until the automobile is also registered, *for students in residence on the campus and for those who commute by automobile to the campus*. A \$6.00 non-refundable registration fee is charged for automobiles each term, and there is a \$2.00 fee for motorcycles and other two-wheeled vehicles, which must also be registered. If the student registers for courses and later decides to bring an automobile on the campus, the automobile must be registered *on the same day that it is brought on the campus*.

Students are required to establish ownership by presenting state registration, title, bill of sale, or state inspection worksheet. Students are responsible for knowing and complying with campus traffic and parking regulations at all times. Violators are fined, and all fines must be paid within fourteen days of receipt of ticket. After this time, if the fine is not paid the car is considered in violation of University policy, is banned from the campus, and may be towed away at the student's expense. More specific details concerning possession, registration, and parking of automobiles, including a map indicating appropriate parking locations, is given each student at the time of registration.

Undergraduate Registration

Registration for the first term begins in the Registrar's Office, 110 Reynolda Hall, at 9:00 a.m. on Wednesday, May 26, and closes at 12:00 noon. Registration for the second term begins in the Registrar's Office at 9:00 a.m. on Thursday, July 1, and closes at 12:00 noon. *No student is allowed to register after the fifth day of either term.*

Graduate Registration

Graduate students working toward a degree and unclassified graduate students taking regular courses offered in the summer session register for the first five-week term on May 26 in the Office of the Dean of the Graduate School, 210 Reynolda Hall, between the hours of 9:00 a.m. and 12:00 noon. Registration for the second five-week term is on July 1 from 9:00 a.m. to 12:00 noon in the Graduate School office. Unclassified graduate students in the American Foundations Program or other special programs register at special times according to instructions from the director of the program.

Undergraduate Class Regulations

Opening of Classes. All classes in the first five-week term begin at 1:00 p.m. on Wednesday, May 26. Science classes in the first five-week term meet for the first time at 1:00 p.m. on May 26 and thereafter at the regularly scheduled time of 8:00 a.m. to 1:00 p.m.

In the second five-week term, classes begin at 1:00 p.m. on Thursday, July 1. Science classes in the second five-week term meet for the first time at 1:00 p.m. on July 1 and thereafter at the regularly scheduled time of 8:00 a.m. to 1:00 p.m.

Course Changes. After registration, necessary course changes must be made immediately in the Registrar's Office and not later than the fifth day in each term.

Dropping a Course. The last day for dropping a class without penalty is June 1 in the first term and July 8 in the second term. Any course dropped *before* this date must be approved by the Registrar; *after* this date the drop must be approved by the Dean of the Summer Session. Except in cases of emergency, the grade in the course is usually recorded as F. If at any time a student drops any course without prior written approval of the Dean, a grade of F for that course is reported by the instructor to the Registrar.

Attendance. Attendance regulations specifically place the responsibility for class attendance upon the individual student. *He or she is expected to attend classes regularly and punctually.* A student should recognize that one of the most vital aspects of a residential college experience is attendance in the classroom and that the value of this academic experience cannot fully be measured by tests alone.

Students are considered sufficiently mature to appreciate the necessity of regular attendance, to accept this personal responsibility, to demonstrate the kind of self-discipline essential for such performance, and to recognize and accept the consequences of failure to attend. An instructor may refer to the Office of the Dean of the College for suitable action students who in his or her opinion are causing their work or that of the class to suffer because of absence or lateness. Any student who does not attend classes regularly, or who demonstrates other evidence of academic irresponsibility, is subject to such disciplinary action as the Committee on Academic Affairs may prescribe, including immediate suspension.

The Office of the Dean of the College maintains a list of students who have been absent from class because of illness certified by the Health Service or for other extenuating circumstances. Such absences are considered excused and a record of them is available to instructors. An instructor determines whether work the student has missed, including examinations, may be made up.

Withdrawal from the University. A student who finds it necessary to withdraw must file an application with the Dean of the Summer Session. Before withdrawal in good standing may be recorded, the application must be endorsed by the Director of Housing, the Treasurer, and the Registrar and must be approved by the Dean of the Summer Session. If a student leaves the College without officially withdrawing, he or she is assigned failing grades in all current courses and unofficial withdrawal is indicated on the record.

Auditing of Classes. A student enrolled in a full-time program may audit classes without charge with the permission of the instructor. With the permission of the Dean of the Summer Session and the instructor, others may audit classes at a charge of \$30.00 per course. An auditor is listed on the class roll as such and is subject to the usual attendance regulations and to whatever additional requirements the instructor may impose. If these conditions are properly fulfilled, a notation "audit" is entered in lieu of a grade on the final grade report. For the regularly enrolled student, this notation is also entered on the permanent record. An auditor may receive no grade or credit for the course. An audit course may not be changed to a credit course and a credit course may not be changed to an audit course.

Grading

For all courses carrying undergraduate credit there are six grades: A (exceptionally high achievement), B (superior), C (satisfactory), D (passing but unsatisfactory), E (conditional failure), and F (failure). An A has the grade point value of four for each credit involved, a B the value of three, a C the value of two, and a D the value of one.

For all courses carrying graduate credit there are three passing grades — A (excellent), B (good), and C (low pass) — and one failing grade — F. An A has the grade point value of three for each semester hour of credit involved, a B the value of two, and a C the value of one.

Credits. Undergraduate courses carry four credits each unless otherwise stated. Two courses for a total of eight credits constitute a normal load in each five-week term. Teachers and public school administrators enrolled in the Graduate School and seeking renewal of the public school certificate may obtain six semester hours credit by taking two courses in either term. Those with problems should consult the Director of Undergraduate Teacher Education.

Grade Reports and Transcripts. Students receive a report which indicates courses taken and grades received. Those who would like a transcript of summer session courses sent to another college or university or to the Department of Public Instruction of North Carolina should request one from the Registrar's Office.

Honor System

The *honor system* is an expression of the concern that students be motivated by ideals of honor and integrity. It is an integral part of the student government of the College as adopted by students and approved by the faculty. Its essence is that each student's word can be trusted implicitly and that any violation of a student's word is an offense against the whole student community. The honor system binds students neither

to give nor receive aid on any examination, quiz, or other pledge work; to have complete respect for the property rights of others; not to make false or deceiving statements regarding academic matters to another member of the University community; not to give false testimony or refuse to pay just debts; and to confront any student who has violated the honor system and tell him or her that it is his or her responsibility to report himself or herself or face the possibility of being reported to the Honor Council.



Special Programs

Master of Arts in Education

The Department of Education offers the Master of Arts in Education degree in the certificate areas of school counseling and School Psychologist II — Psychometrist; in the graduate secondary teaching certificate areas of biology, chemistry, English, history, mathematics, physical education, physics, and speech; and in all elementary certificate teaching areas. These programs have been approved by the Board of Education of North Carolina as meeting state certificate requirements. The program in counseling leading to the Master of Arts in Education degree is accredited by the National Council for the Accreditation of Teacher Education. The Department also offers Master of Arts in Education programs in general counseling and in Foundations of Education.

A number of assistantships, fellowships, and scholarships are available for qualified teachers who wish to enroll as regular students in the term beginning in September 1982. Assistantships, valued at \$8,450, require twelve to fifteen hours per week service in the Department of Education. Fellowships are valued at \$6,100. Scholarships cover the cost of tuition. Applications for financial assistance should be submitted before March 1.

For teachers who cannot attend during the academic year, the residence and course requirements for the Masters of Arts in Education degree can be completed principally in summer sessions. (For degree requirements and courses offered during the summer of 1982, consult other sections of this bulletin.) Applications for summer scholarships are accepted until April 15.

A graduate bulletin and forms on which to apply for admission and financial assistance can be obtained from the Office of the Dean of the Graduate School.

Special Programs for Teachers on Teaching the Gifted

The Department of Education offers two special terms for public school teachers during the summer, focusing on the area of teaching gifted children. The first session is from June 21–July 17 and the second session from July 19–August 14. For details on course offerings and class meetings, see the curriculum section of this bulletin. Persons desiring additional information should write Joseph Milner, Chairman of the Department of Education, 7266 Reynolda Station, Winston-Salem, North Carolina 27109, or telephone (919) 761-5341.

American Foundations Program in History

The University and Reynolda House, a museum of American art near the Reynolda Campus, have combined resources to offer a program for graduate and undergraduate students and teachers of history, art, literature, and music, to be held for the fifteenth consecutive summer at Reynolda House, June 21–July 30.

Nature and Purpose. The approach is interdisciplinary. Using the American art collection, architecture, literature, music, and the decorative arts, it focuses on the nineteenth and twentieth centuries. The course is designed to be a stimulating experience for people who are teaching or who plan to teach in the future, as well as for

students of history, art, literature, and music. From 9:00 to 3:00 daily, students are involved in lectures, reading, reflecting, discussion, writing, and individual experiences such as stone sculpturing and painting. A one-week trip to New York enables students to visit places of historic, artistic, and literary interest for a comparison with and expansion upon local collections.

Scholarships. In-service public school teachers in North Carolina are encouraged to apply for tuition grants directly to the State Department of Education, Division of Staff Development, Raleigh, North Carolina 27611. The University provides students not otherwise provided for with an educational scholarship amounting to one half the regular summer session tuition. A grant from Reynolda House makes it possible for each student to receive partial coverage of tours and special activities.

This year for the first time six full scholarships including travel allotment to and from Winston-Salem will be given: three to students of academic merit and three to teachers with ten years' experience and superior letters of recommendation from their immediate superiors.

Credit. The course provides six semester hours of credit which can be used toward a master's degree in history or for certificate renewal. Credit is issued by the University, and the course is listed as History 463 – 464, *American Foundations*.

Faculty and Administration. Conducting the course are Cyclone Covey, professor of history at the University; Barbara Babcock Millhouse, American art lecturer and president of Reynolda House; Doyle Fosso, professor of English at the University; Nicholas B. Bragg, director of Reynolda House and program coordinator; and other faculty members from the University.

Qualifications for Applicants. The program is designed primarily for students and teachers, especially those interested in American history, literature, art, and music. Teachers qualify who hold the B.A. degree and are seeking certificate renewal or who are working toward the M.A. degree. The class is limited to twenty-five students, not more than five of whom may be recent college graduates or undergraduates. The application deadline is May 31. Classes begin on Monday, June 21. Inquiries should be addressed to the Dean of the Summer Session, 7293 Reynolda Station, Winston-Salem, North Carolina 27109.

Swiss French Civilization

The Department of Romance Languages sponsors a four-week visit to Switzerland to study Swiss French civilization and the French language from May 13 to June 10. Living arrangements are made through the Experiment in International Living. All students live in the same town, each with a Swiss family. Visits are made individually with the family or in groups to other locations such as Geneva, Lausanne, Berne, Fribourg, the Chateau de Chillon, and to the mountains, glaciers, and lakes of Switzerland. Each student must agree in advance to participate in group activities; some proficiency in conversational French is recommended. A journal and a paper, both in French, describing in detail some aspect of Swiss French civilization are required of each student.

Interested students should consult John E. Parker Jr., Professor of Romance Languages, 7566 Reynolda Station, Winston-Salem, North Carolina 27109.

European Geography Study Tour

A guided tour of Western Europe to study its physical, economic, social, and cultural environments will be offered during the first term of the summer session (May 24–June 19, approximate dates). Cities visited include London, Amsterdam, Heidelberg, Munich, Vienna, Venice, Rome, Florence, and Paris. A day will be spent in the Swiss Alps. An orientation on slides and motion pictures will be provided before the tour. The course, Education 272, will provide four credits and may be taken on a pass-fail basis, or for a letter grade. P—permission of instructor. For additional information write to Herman J. Preseren, Professor of Education, 7266 Reynolda Station, Winston-Salem, North Carolina 27109.

Seminar in the Mediterranean World and Holy Land Tour

The Department of Religion will sponsor a Seminar in the Mediterranean World and a Holy Land Tour, June 6–16, 1982. The tour will focus on the Bible Lands of Jordan and Israel, and will be led by Charles H. Talbert, Professor of Religion. The tour may be taken on an audit basis or students seeking credit may register for Religion 218, Seminar in the Mediterranean World and receive four credits. Inquiries should be directed to Charles H. Talbert, Box 7212, Reynolda Station, Winston-Salem, North Carolina 27109.

Interdisciplinary Overseas Research Program

The Overseas Research Center conducts its fifteenth field project in Central America June 14–July 5. Research will focus on a continuing study and documentation of sociocultural change in general and nutrition and health in particular. The research site will be on the Limon Coast of Costa Rica south of Puerto Viejo. The center offers an interdisciplinary program and is open to any student interested in problems facing developing nations. Incoming Freshmen are invited to participate. All applications should be received by mid-April.

For additional information contact David K. Evans, Associate Professor of Anthropology, 7808 Reynolda Station, Winston-Salem, North Carolina 27109. Telephone (919) 761-5495 or 761-0187.

Archeological Field School in Yadkin County, North Carolina

The Department of Anthropology at Wake Forest University will offer an archeological field school between the dates of July 5 and August 13, 1982. The school will be conducted on the late prehistoric site of Donnaha in Yadkin County, North Carolina. The work will involve the excavation of prehistoric remains using standard methods of archeological recovery. In addition to the five day work week, some week-end trips to local archeological sites of interest are planned.

The student will receive eight credits in Anthropology 381 and 382 for the six weeks work at Donnaha. For more information write J. Ned Woodall, 7808 Reynolda Station, Winston-Salem, North Carolina 27109, or telephone (919) 761-5495.

Archeological Field School in Caesarea

The Department of Religion of Wake Forest University will participate in the excavation at Caesarea, Israel, July 1–August 3, 1982. Credit for Religion 315 and 316 is optional. Students interested in this program should consult E. W. Hamrick, Department of Religion, or telephone (919) 761-5462.

American College of Sports Medicine Workshops

The American College of Sports Medicine will sponsor a preventive/rehabilitative exercise technologist workshop and an exercise test technologist certification session during the first term of the 1982 summer session. The workshop is June 14–23 and the certification session is June 24–25.

Inquiries should be addressed to Paul M. Ribisl, Director of American College of Sports Medicine Workshop, 7234 Reynolda Station, Winston-Salem, North Carolina 27109.

Marching Band Workshop

A special workshop in corps style marching band techniques, sponsored by Duncan Music Company and the Demon Deacons Marching Band, will be offered June 18–19, 1982.

One unit of renewal credit will be offered to music educators. Inquiries should be addressed to Davidson Burgess, Director of Bands, 7345 Reynolda Station, Winston-Salem, North Carolina 27109.

Debate Workshops for High School Students and Coaches

The University invites superior high school students with an interest in forensics to participate in a debate workshop to be held on campus June 28–July 18. Students live in University residence halls under the supervision of the workshop staff. Nationally recognized authorities in debate theory serve in the distinguished lecturer series; an instructional staff from throughout the country works individually with students. The recreational facilities of the University are available for all participants. Students who have completed the ninth grade may apply.

A coaches' workshop will be held June 28–July 3. Graduate credit will be available to participants.

Interested students and teachers should consult Allan D. Loudon, Department of Speech Communication and Theatre Arts, 7347 Reynolda Station, Winston-Salem, North Carolina 27109.

Boys' State Program in Citizenship For High School Students

In cooperation with the American Legion, the University sponsors North Carolina Boys' State, a program to provide training in American government and citizenship.

The program begins on June 13 and extends through June 19. Approximately 475 boys attend. Applicants must have a B average and must have given evidence of

leadership in high school. Participants have all expenses paid and are selected by the American Legion in conjunction with local high school officials.

Inquiries should be addressed to the Adjutant of the North Carolina Department of the American Legion, Box 26657, Raleigh, North Carolina 27611, or to Jack D. Fleer, Professor of Politics, 7568 Reynolda Station, Winston-Salem, North Carolina 27109.

Wake Forest University Cheerleaders Camp

The Second Wake Forest Cheerleaders Camp will offer two one-week (Sunday–Thursday) sessions, July 11–15 and July 18–22. Camps are limited to 200 participants each week. The camp is open to students eight years of age through senior high school. All of the staff are or have been varsity cheerleaders at Wake Forest University or another ACC school, and have taught at one of the national cheerleading camps. For additional information, write Anne Bingham, Director, Cheerleaders Camp, 7265 Reynolda Station, Winston-Salem, North Carolina 27109, or telephone (919) 761-5626.

Summer Golf Program

The Jesse Haddock Summer Golf Program, first offered in 1979, is available again this year. The program is under the supervision of Coach Jesse Haddock, and members of the Wake Forest University golf team will be counselors. Golfers are divided into small groups according to age and ability. Off- and on-the-course instruction includes lectures, exhibitions, films, and games. Golf courses at Bermuda Run Country Club, home of the Wake Forest golf team, and at Tanglewood, site of the 1974 PGA Championship, will be the scene of play.

Four sessions are available in 1982: first session, June 13–June 26; second session, July 5–17; Super Session I, June 13–July 3; Super Session II, July 5–July 24. The Super Sessions will include a more concentrated exposure to members of the PGA Tour and a trip to Pinehurst, North Carolina, “the golf capital of the world.” Also for 1982, campers may attend any single week during the first and second sessions. Participants must be eighteen years of age or younger. Enrollment is limited. For additional information, write Jesse Haddock, Inc., Wake Forest University, 6696 Reynolda Station, Winston-Salem, North Carolina 27109 or call (919) 761-5619.

Basketball Camp

The University basketball coaching staff conducts a basketball camp for young people age nine to eighteen. The camp includes three sessions, the first, July 11–16; the second, July 18–23; and the third session, July 25–30. Enrollment in each is limited. Head Coach Carl Tacy and Assistant Coaches Mark Freidinger, Ernie Nestor, and Herb Cline are in charge and in attendance at every session. The coaches are assisted by outstanding professionals and college players. Campers live in residence halls on the campus and meals are provided in the University cafeteria. Instruction is given on the four gymnasium courts. Inquiries should be addressed to 7506 Reynolda Station, Winston-Salem, North Carolina 27109.

Sports Camp

The Department of Physical Education will sponsor a Sports Camp for boys and girls eight through fifteen. The camp, in its twenty-second year, meets Monday–Friday mornings from 8:30 until 12:15. Two sessions of the camp are scheduled: June 21–July 2 and July 5–16. Leo Ellison, Professor of Physical Education, serves as director of the Sports Camp and is assisted by other members of the faculty. Instruction is given in a wide variety of sports. Inquiries should be addressed to the Department of Physical Education, 7234 Reynolda Station, Winston-Salem, North Carolina 27109.



Undergraduate Registration

First Term

Wednesday, May 26, in 110 Reynolda Hall beginning at 9:00, alphabetically by surname according to the following schedule:

9:00– 9:30 A–E	10:00–10:30 L–Q
9:30–10:00 F–K	10:30–11:00 R–Z

Second Term

Thursday, July 1, in 110 Reynolda Hall beginning at 9:00, alphabetically by surname according to the following schedule:

9:00– 9:30 M–R	10:00–10:30 A–E
9:30–10:00 S–Z	10:30–11:00 G–L

Graduate Registration

Registration for graduate students for the first term is in 210 Reynolda Hall, on Wednesday, May 26, from 9:00–12:00.

Registration for graduate students for the second term is in 210 Reynolda Hall, on Thursday, July 1, from 9:00–12:00.

Classes and Examinations

First Term

Class Period	First Meeting May 26	Regular Daily Schedule	Examinations	
First	1:00 – 1:50	8:00 – 9:15	Monday, June 28	9:00 – 12:00
Second	2:00 – 2:50	9:25 – 10:40	Monday, June 28	2:00 – 5:00
Third	3:00 – 3:50	10:50 – 12:05	Tuesday, June 29	9:00 – 12:00
Fourth	4:00 – 4:50	12:15 – 1:30	Tuesday, June 29	2:00 – 5:00
Fifth	5:00 – 5:50	1:45 – 3:45	Tuesday, June 29	arranged

Second Term

Class period	First Meeting July 1	Regular Daily Schedule	Examinations	
First	1:00 – 1:50	8:00 – 9:15	Thursday, August 5	9:00 – 12:00
Second	2:00 – 2:50	9:25 – 10:40	Thursday, August 5	2:00 – 5:00
Third	3:00 – 3:50	10:50 – 12:05	Friday, August 6	9:00 – 12:00
Fourth	4:00 – 4:50	12:15 – 1:30	Friday, August 6	2:00 – 5:00
Fifth	5:00 – 5:50	1:45 – 3:45	Friday, August 6	arranged

Courses of Instruction

Courses numbered 100–200 are primarily for freshmen; 200–300 primarily for sophomores; 300–400 primarily for juniors, seniors, and graduate students; and 400–500 for graduate students.

Credits for undergraduates and semester hours of credit for graduate students are shown by numerals immediately after the course title — for example, (4) or (3). To translate credits into hours, a four-credit course is assigned 3.6 semester hours. Some laboratory courses have numerals after course descriptions to show the number of hours per week normally spent in the laboratory — for example, (Lab — three hours). The symbol *P* — followed by course numbers or titles shows prerequisites for the course.

A normal load is two courses, or eight undergraduate credits, in each five-week term. Undergraduate courses normally carry four credits each and graduate courses three semester hours of credit each.

Unless otherwise indicated, classes for all courses except laboratory science courses meet daily Monday through Friday, and on the first, third, and fifth Saturdays in the first term, and on the second Saturday (July 10) in the second term for periods of seventy-five minutes each. Science lecture and laboratory courses meet from 8:00 a.m. to 1:00 p.m. on the dates indicated above in each term.

Although such occurrences are rare, the University reserves the right not to offer courses in the summer session for which there is insufficient registration; to modify, withdraw, or make substitutions for any course; and to change the instructor for any course indicated in this bulletin. The schedule supplement available at registration should be consulted for changes. Location of classes will be indicated on the supplement also.

Anthropology

151. General Anthropology I. Archeology and Human Evolution. (4) Origin and evolution of man with a focus on human biological and sociocultural change during the Plio-Pleistocene. (Credit will not be granted for both Anthropology 151 and Anthropology 162.)

Second Term/10:50–12:05

Weaver

152. General Anthropology II. Cultural Anthropology. (4) A cross-cultural analysis of human institutions with a survey of major theories, explaining cultural variety and human nature. (Credit will not be granted for both Anthropology 152 and Anthropology 341.)

First Term/10:50–12:05

Banks

381, 382. Archeological Research. (4,4) The recovery of anthropological data through the use of archeology, taught in the excavation and interpretation of a prehistoric site. P—Anthropology 151 and permission of instructor or Anthropology 162. (See special programs.)

Special Term/July 12–August 20

Woodall

383, 384. Field Research in Cultural Anthropology. (4,4) Training in techniques for study of foreign cultures, carried out in the field. P—Anthropology 151, or 152, or

162. (See special programs.)
 Special Term/June 14–July 5

Evans

Biology

111. Biological Principles. (5) Fundamental principles and concepts in biology.
 (Five credits or four semester hours)

Lecture 8:00–9:00 and 12:00–1:00 daily

Laboratory 9:00–12:00 daily

First Term

Lane

150. Organismic Biology. (5) Morphology and phylogeny of plants and animals.
 (Five credits or four semester hours) P—Biology 111 or permission of instructor.

Lecture 8:00–9:00 and 12:00–1:00 daily

Laboratory 9:00–12:00 daily

Second Term

McDonald

391, 392, 393, 394. Special Problems in Biology. (2,2,2,2) Independent library
 and laboratory investigation carried out under the supervision of a member of the staff;
 393, 394 not to be counted toward the major. P—Permission of instructor.

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

411, 412. Directed Study in Biology. (1,1) Reading and/or laboratory problems
 carried out under the supervision of a faculty member. P—Permission of instructor.

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

491, 492. Thesis Research. (3,3)

591, 592. Dissertation Research. (Hours to be determined.)

Business and Accountancy

Business

201. Quantitative Methods I. (4) Techniques of analysis of numerical data, including
 descriptive statistics, linear correlation and regression, statistical estimation, and hypo-
 thesis testing. P—Mathematics 157.

First Term/10:50–12:05

Dewasthali

202. Quantitative Methods II. (4) Decision theory emphasizing the combined use of
 information from historical data, subjective judgments, and sampling results in business
 decision making. Nonparametric statistics and linear programming models included.
 P—Business 201.

Second Term/10:50–12:05

Ewing

211. Organizational Theory and Behavior. (4) The study of macro and micro
 organizational design — structure, processes, development, climate, behavior, and
 performance evaluations. P—Junior standing.

First Term/10:50–12:05

Ewing

231. Financial Management. (4) Analysis of financial decision making at the level of the individual business enterprise. P—Accountancy 112.

First Term/9:25–10:40

Thomas

Accountancy

111. Accounting Principles I. (4) The basic accounting process and underlying principles pertaining to the preparation and interpretation of published financial statements.

First Term/9:25–10:40

Cook

112. Accounting Principles II. (4) A continuation of Accountancy 111 with emphasis on managerial accounting. P—Accountancy 111.

Second Term/9:25–10:40

Staff

151. Intermediate Accounting. (4) A detailed analysis of theory and related problems for typical accounts on published financial statements. P—Accountancy 112.

First Term/9:25–10:40

Hylton

152. Intermediate Accounting. (4) A continuation of Accountancy 151. P—Accountancy 151.

Second Term/9:25–10:40

Hylton

Chemistry

111. College Chemistry. (5) Fundamental chemical principles. Laboratory covers experimental aspects of basic concepts. (Five credits or four semester hours)

Lecture 8:00–10:00 daily

Laboratory 10:00–1:00 daily

First Term

Gross

112. College Chemistry. (5) Fundamental chemical principles. A continuation of Chemistry 111. Laboratory covers experimental aspects of basic concepts. P—Chemistry 111. (Five credits or four semester hours)

Lecture 8:00–10:00 daily

Laboratory 10:00–1:00 daily

Second Term

McKneight

301, 302. Elective Research. (0,0)

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

391, 392. Undergraduate Research. (2,2)

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

491, 492. Thesis Research. (3,3)

Staff

591, 592. Dissertation Research. (Hours arranged)

Staff

Economics

151. Principles of Economics. (4) A study of individual economic units in a market economy, with some attention to monopoly, labor unions, and poverty.

First Term/9:25–10:40

Hydell

152. Principles of Economics. (4) Attention is focused on the functioning of the economy as a whole, with particular reference to employment, inflation, economic growth, and policy. P—Economics 151.

Second Term/9:25–10:40

Fuguitt

202. Macroeconomic Theory. (4) A study of Keynesian and post-Keynesian theories about the determination of the level of national income, employment, and economic growth. P—Economics 151, 152.

First Term/12:15–1:30

Hydell

Education

201. Foundations of Education. (4) Philosophical, historical, and sociological foundations of education, including analysis of contemporary issues and problems.

First Term/10:50–12:05

Reeves

211. Educational Psychology. (4) General principles of adolescent development. The nature, theories, processes, and conditions of effective teaching and learning. Appraising and directing learning.

First Term/9:25–10:40

Litcher

271. Introduction to Geography. (4) A study of the physical environment and its relationship to man, including an examination of climate, vegetation, soils, water resources, and land forms found in various regions of the world.

Second Term/12:15–1:30

Preseren

272. Geography Study Tour. (4) A guided tour to selected areas in Europe to study physical, economic, and cultural environments and their influence on man. Background references for reading are suggested prior to the tour. (See Special Programs)

First Term/May 24–June 19 (approximate dates)

Preseren

301. Audiovisual Education. (4) Introduction to the field of audiovisual education; development and application of skills in the use of instructional materials, equipment, and programs.

First Term/12:15–1:30

Staff

341. Principles of Counseling and Guidance. (4) Counseling history, philosophy, theory, procedure, and process. Therapeutic and development counseling approaches in guidance and personnel work in educational, ~~social~~, business, and community service agencies.

Second Term/9:25–10:40

Roberge

442. Group Procedures in Counseling. (3) An experiential and conceptual exploration of the psychological dynamics and interpersonal communication of small groups, including the purpose and process of various group procedures such as group guidance, group counseling, T-groups, encounter groups, sensitivity training, psychodrama, and

sensory awareness techniques. P—Education 341 or 441 and permission of instructor.
First Term/9:25–10:40 Elmore

443. Vocational Psychology. (3) Vocational development through the life span; psychological aspects of work, occupational structure, and the classifications of occupational literature, theories of vocational choice, and their implications for vocational counseling.

Second Term/10:50–12:05 Adams

445. Counseling Practicum and Internship. (3–6) Observation of counseling, case study procedures, analysis of tape recorded interview, and role playing; supervised counseling experience.

First Term/Hours arranged Staff

Second Term/Hours arranged Staff

463. Seminar in Counseling. (3) P—Permission of instructor.

First Term/8:00–9:15 Elmore

491, 492. Thesis Research. (3,3)

The following education courses are offered during special terms and hours:

Special Term I, June 21–July 17

390. Education of Exceptional Persons. (4) A survey of the types of exceptionality. Emphasis will be placed on characteristics, identification, educational programming, management, and evaluation.

Special Term/9:00–10:40 Litcher

392. The Psychology of the Gifted Child. (4) A discussion of giftedness and creativity in children, and its relationship to adult superior performance. Topics to be covered include a history of the study of precocity, methods and problems of identification, the relationship of giftedness to creativity, personality characteristics and social-emotional problems of gifted children, and the social implications of studying giftedness.

Special Term/12:40–2:20 Solano

481. Methodology and Research (Intermediate). (3) Advanced study of the methods and materials of a specific discipline in the curriculum (English, social studies, mathematics, science) with special attention directed to the basic research in the discipline.

Special Term/12:40–2:20 Shelton

483. Readings and Research in Education. (1,2, or 3) Independent study and research on topics relevant to the student's field of concentration. The course may include a special reading program in an area not covered by other courses or a special research project. Supervision by faculty member. Hours of credit to be determined prior to registration.

Special Term/Hours arranged Staff

Special Term II, July 19–August 14

391. Teaching the Gifted. (4) A general investigation of theory and practice which has special meaning for teachers of the gifted. The course of study includes an examination of general curriculum matters such as classroom styles, learning modes, epistemolo-

gical theories, developmental constructs, and psychosociological patterns which have special pertinence to the teacher of the gifted.

Special Term/3:40–5:20

Milner

394. Internship in Education of the Gifted. (4) An intensive period of observation and instruction of gifted students. Readings and directed reflection upon the classroom experience will be used to develop a richer understanding of such a special school setting.

Special Term/Hours arranged

Milner

431. Foundations of Curriculum Development. (3) Investigation of general and special curriculum matters, K–12.

Special Term/10:50–12:30

Epstein

481. Methodology and Research (Primary). (3) Advanced study of the methods and materials of a specific discipline in the curriculum (English, social studies, mathematics, science) with special attention directed to the basic research in the discipline.

Special Term/9:00–10:40

Shelton

483. Readings and Research in Education. (1, 2, or 3) Independent study and research on topics relevant to the student's field of concentration. The course may include a special reading program in an area not covered by other courses or a special research project. Supervision by a faculty member. Hours of credit to be determined prior to registration.

Special Term/Hours arranged

Staff

English

160. Survey of Major British Writers. (4) Eight to ten writers representing different periods and genres; primarily lecture.

First Term/9:25–10:40

Shorter

170. Survey of Major American Writers. (4) Nine to eleven writers representing different periods and genres; primarily lecture.

First Term/8:00–9:15

Moss

Second Term/8:00–9:15

Maine

322S. Double-vision in Renaissance Literature. (4) Study of the presence in Renaissance poetry, prose, and drama of multiple views of people, the world, events, and ideas. Works by Shakespeare, Marlowe, Sydney, Donne, Bacon, Browne, and others.

Second Term/9:25–10:40

Brailow

371S. A Comparative Study of Nathaniel Hawthorne and Henry James. (4) Study of selected novels, short stories, and criticism to examine the relationship between these two pivotal nineteenth-century figures, focusing in particular on their attitudes toward American culture and the role of the artist. (Some attention will be given to biography and secondary criticism.)

First Term/10:50–12:05

Reynolds

405S. Old English Language and Literature. (3) Introduction to Old English language, with readings in selected poems and prose, and a study of *Beowulf* in translation. Examination of the historical and cultural context of Old English literature. Second Term/10:50–12:05 Overing

427S. Seminar in Seventeenth Century British Literature. (3) Concentration on attitudes toward creation, cosmic order, nature, and human effort, mainly in poetry. Short papers, oral reports, and seminar discussion. First Term/9:25–10:40 Ettin

French

153. Intermediate French. (5) A review of grammar and composition with practice in conversation. Reading of selected texts. Class meets daily for two periods. Lab required. P—French 112, 113, or two years of high school French. First Term/9:25–10:40 and 12:15–1:30 Beaudry

181. Swiss French Civilization. (4) The course is designed to acquaint the student with the Swiss people and their civilization through living for a few weeks with families. Visits are made to points of cultural interest, historical, literary, and artistic. A journal and a paper describing in detail some aspect of Swiss French civilization, both in French, are required. Usually offered in the summer. First Term/May 13–June 10 Parker

214. Masterpieces of French Literature II. (4) Reading of selected texts in French. Particular periods, genres, and authors may vary from summer to summer. Parallel reading and reports. Satisfies either the basic or the divisional requirement. Only one course in masterpieces may count toward the major. P—French 153 or equivalent. Second Term/10:50–12:05 Wells

History

101. The Rise of the West. (4) A survey of ancient, medieval, and early modern history to 1700. First Term/12:15–1:30 Hendricks

102. Europe and the World in the Modern Era. (4) A survey of modern Europe from 1700 to the present. Second Term/10:50–12:05 Smiley

152. The United States Since 1865. (4) Political, social, economic, and intellectual aspects. First Term/10:50–12:05 Smith

342. The Middle East from the Ottoman Empire to the Present. (4) Major subjects covered are the rise and fall of the Ottoman Empire, the Arabs and Persians under Ottoman hegemony, the rise of Arab nationalism, the emergence of the modern Arab states, and their role in the post-World War II era. Second Term/9:25–10:40 Gokhale

344. Modern China. (4) The Manchu Dynasty and its response to the Western challenge; the 1911 Revolution; the warlord era and the rise of the Communists; Chinese Communist society; the Cultural Revolution.

First Term/9:25 – 10:40

Sinclair

357. The Civil War and Reconstruction. (4) The political and military events of the war and the economic, social, and political readjustments which followed.

Second Term/12:15–1:30

Yearns

398. Individual Study. (4) A project in an area of study not otherwise available in the department; permitted upon departmental approval of petition presented by a qualified student.

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

399. Directed Reading. (1-4)

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

463S, 464S. American Foundations. (6) A survey of the European heritage and colonial environment which developed into the American culture of the late eighteenth and nineteenth centuries. A cooperative program of the University and Reynolda House involving the staffs of both institutions. Lectures provide a continuity of theme; Old Salem and other historic sites provide opportunities for giving history a visual dimension. A research project is required. Primarily for teachers; scholarships available. (See special programs.)

June 21–July 30/Hours arranged

Bragg, Covey, Millhouse

481, 482. Directed Reading. (3,3)

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

491, 492. Thesis Research. (3,3)

Humanities

215. Germanic and Slavic Literature. (4) A study of approximately twelve works in translation taken from Germanic and Slavic literatures. Satisfies a Division I requirement.

First Term/9:25-10:40

Sellner

216. Romance Literature. (4) A study of approximately twelve works in translation from Romance literature. Satisfies a Division I requirement.

Second Term 9:25–10:40

Ganelin

264. Greek and Roman Comedy. (4) Representative works of Aristophanes, Menander, Plautus, and Terence, with attention to the origins and development of comedy. A knowledge of the Greek and Latin languages is not required. Satisfies a Division I requirement.

First Term/10:50–12:05

MacQueen

Mathematics

The following courses can be used as credit toward basic requirements in Division II: Mathematics 111, 112, 115, 116, and 157.

111. Calculus with Analytic Geometry I. (5) Differential and integral calculus and the basic concepts of analytic geometry. (Credit not allowed for both 116 and 111.) Laboratory two hours.

First Term/9:25 – 10:40

Graham May

112. Calculus with Analytic Geometry II. (4) Continuation of topics in Mathematics 111. Laboratory two hours.

Second Term/8:00–9:15

Wadill

115. Finite Mathematics. (4) Probability and statistics, matrices, linear programming, Markov chains, and theory of games.

First Term/8:00 – 9:15

Hayashi

116. The Essential Calculus. (4) A one-semester course in differential and integral calculus, with application to business and the social sciences. (Credit not allowed for both 116 and 111. Students who may take additional calculus should not take 116.) Laboratory two hours.

Second Term/9:25 – 10:40

Howard

155. Introduction to FORTRAN Programming. (4) Lecture and laboratory. A study of FORTRAN language. Students use computer terminals as well as card input.

First Term/10:50–12:05

Hayashi

157. Elementary Probability and Statistics. (4) Probability and distribution functions, means and variances, and sampling distributions. (Credit not allowed for both 156 and 157. No credit after this course for Sociology 380.) Laboratory two hours.

First Term/9:25–10:40

Gaylord May

Second Term/10:50–12:05

Gentry

381. Individual Study. (2,3, or 4) A choice of study in an area of individual interest, to be directed by a faculty adviser.

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

491, 492. Thesis Research. (3,3)

Military Science

202S. Combined Military Fundamentals. (4) History and organization of the United States Army. Basic and intermediate military skills to include leadership styles and techniques, land navigation, dismounted drill, mountaineering, and marksmanship. Class time ~~Monday~~ ^{Wednesday} 3:45 p.m., five days per week with one weekend overnight field trip. (Offered in the summer only. A minimum of six students must enroll for class to be offered.) Not available to students who have taken more than one military fundamentals course.

First Term/1:45–3:45 MTWTF

McBride

Second Term/1:45–3:45 MTWTF

Evano

Music

290S. Marching Band Techniques. (1)

June 18–19/Hours arranged

Burgess

Philosophy

111. Basic Problems of Philosophy. (4) An examination of the basic concepts of several representative philosophers, including their accounts of the nature of knowledge, man, God, mind, and matter.

First Term/9:25–10:40

Hester

First Term/10:50–12:05

Washburn

Second Term/9:25–10:40

Washburn

Second Term/10:50–12:05

Pritchard

Physical Education

310. Applied Field Study. (2) A course involving application and methods of solving problems in a specialized area, according to the student's immediate career goals. P—Physical Education 251 or permission of the instructor.

First Term/Hours arranged

Hottinger

Second Term/Hours arranged

Hottinger

382. Independent Study in Health and Physical Education. (1–4)

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

463S. Advanced Biomechanics. (3) An in-depth study of the mechanical principles which influence human movement. Topics include kinetics, kinematics, cinematography, and electrogoniometry. Prerequisites are any of the following: anatomy, kinesiology, physics, or permission of the instructor.

Second Term/Hours arranged

Meissier

465S. Graded Exercise Testing and Evaluation of Work Capacity. (3) The study of the rationale for the use of graded exercise testing in the evaluation of functional work capacity. Lectures include the analysis of different modes of evaluation: treadmill, bicycle ergometer, arm ergometer, and field testing, with the application of results in the evaluation of normal and cardiac patients. Laboratory experiences include the use of electrocardiogram, ergometers, and metabolic analyzers in the assessment of functional capacity.

Second Term/Hours arranged

Ribisl

482. Independent Study. (1–3)

Staff

491, 492. Thesis Research. (3,3)

Staff

Physics

111. Introductory Physics. (5) A basic course for freshmen and sophomores, including the elements of mechanics, properties of matter, wave motion, sound, heat, electricity and magnetism, light, and some of the recent developments in physics. Lecture two

hours daily. Laboratory two hours, Monday through Friday. (Five credits or four semester hours)

First Term/8:00–12:30

Shields

112. Introductory Physics. (5) A continuation of Physics 111. Lecture two hours daily. Laboratory two hours, Monday through Friday. (Five credits or four semester hours)

Second Term/8:00–12:30

Matthews

491, 492. Thesis Research. (3,3)

Staff

Politics

113. The American Political Order. (4) This course is an examination of the American political system through a study of its basic political documents, its institutions, and its current values. Beginning with a reading of Tocqueville's *Democracy in America*, the course will explore the problems inherent in a democratic order, the institutional features supporting a republican form of government, and the relationship between the political order and the literature, arts and popular media.

First Term/9:25–10:40

Reinhardt

114. Comparing Political Systems. (4) The course is concerned with understanding some of the differences in political form, style, and ideology found in diverse twentieth-century societies such as those of revolutionary socialist regimes (Cuba), modern oligarchies (the Soviet Union), liberal democracies (Great Britain), and others.

First Term/8:00–9:15

Moses

Psychology

151. Introductory Psychology. (4) A systematic survey of psychology as the scientific study of behavior. Prerequisite to all other courses in psychology.

First Term/9:25–10:40

Staff

First Term/12:15–1:30

Best

Second Term/12:15–1:30

Staff

239. Altered States of Consciousness. (4) Examination of altered states of consciousness with special reference to sleep and dreams, meditation, hypnosis, and drugs. P—Psychology 151.

Second Term/10:50–12:05

Beck

241. Developmental Psychology. (4) A survey of physical, emotional, cognitive, and social development in humans from conception to death. P—Psychology 151.

Second Term/12:15–1:30

Edwards

260. Social Psychology. (4) A survey of the field, including theories of social behavior, interpersonal attraction, attitudes and attitude change, and group behavior. P—Psychology 151.

First Term/9:25–10:40

Burger

265. Human Sexuality: A Changing Scene. (4) An exploration of the physiological and psychological aspects of human sexuality, with attention to changing sexual mores,

sexual deviances, sexual dysfunction, and sex-related roles. P—Psychology 151.

Second Term/9:25–10:40

Burger

268. Psychology of Business and Industry. (4) Psychological principles and methods applied to problems commonly encountered in business and industry. P—Psychology 151.

Second Term/8:00–9:15

Staff

280. Directed Study. (1–4)

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

335. Fundamentals of Human Motivation. (4) Description and analysis of fundamental motivational phenomena, with special reference to human problems, including reward and punishment, conflict, anxiety, affection, needs for achievement and power, aggression, creativity, and curiosity. P—Psychology 151.

First Term/10:50–12:05

Beck

344. Abnormal Psychology. (4) Descriptive analysis of the major types of abnormal behavior, with focus on organic, psychological, and cultural causes and major modes of therapy. P—Psychology 151.

Second Term/12:15–1:30

Staff

358. Psychology of Woman. (4) The course has two principal objectives: to provide students with a better understanding of the behavior of women by reviewing and analyzing research and theory, and to stimulate students to assess their own attitudes and beliefs. The course atmosphere is informal but research-oriented. The major content areas include biological and evolutionary issues, sex similarities and differences, and motivational issues unique to women. P—Psychology 151.

First Term/8:00–9:15

Jourdan

467. Neuropsychology and Learning Disabilities. (3) Language, perceptual motor, and emotional deficits arising from neurological factors studied in the context of brain functioning and information processing and applied to learning disabilities in children, in both theoretical and practical terms. P—Permission of instructor. (Taught at the Bowman Gray School of Medicine.)

First Term/4:00–5:15

Wood

482. Readings and Research in Psychology. (1, 2, or 3)

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

491, 492. Thesis Research. (1–3, 1–3)

Staff

Religion

111. Introduction to the Old Testament. (4) A survey of the Old Testament designed to introduce the student to the history, literature, and religion of the ancient Hebrews.

First Term/8:00–9:15

Hamrick

112. Introduction to the New Testament. (4) A survey of the literature of the New Testament in the context of early Christian history.

First Term/10:50–12:05

Horton

166. American Religious Life. (4) A study of the history, organization, worship, and beliefs of American religious bodies, with particular attention to cultural factors.

Second Term/9:25–10:40

Mitchell

218. Seminar in the Mediterranean World. (4) Travel and study in such countries as Greece, Italy, Turkey, Egypt, Lebanon, Syria, and Israel.

First Term/arranged

Talbert

286, 287. Directed Reading. (1–4, 1–4) A project in an area of study not otherwise available in the department, permitted upon departmental approval of a petition presented by a qualified student.

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

315, 316. Field Research in Biblical Archeology. (4, 4) A study of the religion and culture of the ancient Near East through the excavation and interpretation of an ancient site.

July 3–August 3

Hamrick

401, 402. Directed Reading. (3,3)

Staff

491, 492. Thesis Research. (3, 3)

Staff

Sociology

151. Principles of Sociology. (4) General introduction to the field: social organization and disorganization, socialization, culture, social change, and other aspects.

First Term/12:15–1:30

Staff

Second Term/10:50–12:05

Gulley

205. Photography in the Social Sciences. (4) Explores the use of photography as a research technique for the social sciences; camera and darkroom instruction included. There is a \$60.00 supplies fee; students must have access to a 35mm camera.

First Term/9:25–10:40

Perricone

248. Marriage and the Family. (4) The social basis of the family, emphasizing the problems growing out of modern conditions and social change.

Second Term/9:25–10:40

Earle

341. Criminology. (4) Crime, its nature, causes, consequences, methods of treatment, and prevention. P—Sociology 151.

Second Term/12:15–1:30

Bechtel



Spanish

112. Elementary Spanish II. (4) A course for beginners covering grammar essentials and emphasizing speaking, writing, and the reading of elementary texts. P—Spanish 111 or equivalent. Lab required.

First Term/9:25–10:40

Bryant

153. Intermediate Spanish. (5) A review of grammar and composition, with practice in conversation. Reading of selected texts. Class meets daily for two periods, with one-half hour of laboratory time. P—Spanish 112, 113, or two years of high school Spanish.

First Term/8:00–9:15 and 10:50–12:05

Martín

214S. Introduction to Hispanic Literature. (4) Selected readings in Spanish and Spanish American literature. Designed as a substitute for either Spanish 215 or 216. P—Spanish 153 or equivalent.

Second Term/9:25–10:40

Newton

Speech Communication and Theatre Arts

121. Introduction to Theatre. (4) A survey of all areas of theatre arts. Experience in laboratory and University Theatre productions. (May be used to satisfy a requirement in Division I.) Laboratory—Three hours.

First Term/9:25–10:40

Tedford

Second Term/9:25–10:40

Staff

151. Public Speaking I. (4) A study of the nature and fundamentals of speech communication. Practice in the preparation and delivery of short speeches.

Second Term/8:00–9:15

Hill

153. Interpersonal Communication. (4) The course is divided into three parts: communication theory, person-to-person communication, and small group interaction.

First Term/10:50–12:05

Louden

156. Oral Interpretation of Literature. (4) Fundamentals of reading aloud, with emphasis on selection, analysis, and performance.

First Term 12:15–1:30

Shirley

161. Voice and Diction. (4) A study of the principles of voice production, with emphasis on phonetics as a basis for correct sound formation.

First Term 9:25–10:40

Shirley

280. Special Seminar: Intercultural Communication—U.S./Chinese Relations. (4) The intensive study of selected topics in communication.

Second Term 9:25–10:40

Go

282. Individual Study. (4) Special research and readings in a choice of interest to be approved and supervised by a faculty adviser.

First Term/Hours arranged

Staff

Second Term/Hours Arranged

Staff

283-B. Radio Practicum I. (2) Individual projects, includes organizational meetings, faculty supervision, and faculty evaluation. (No student may receive more than two credits per term.) Pass/Fail only.

First Term/Hours arranged

Staff

Second Term Hours arranged

Staff

355S. Directing the Forensics Program. (1) A pragmatic study of the methods of directing high school and college forensics with work in the High School Debate

Workshop. Offered in the summer only.

First Term/Hours arranged

Staff

480. Special Seminar: Intercultural Communication—U.S./Chinese Relations. (3) The intensive study of selected topics in communication.

Second Term 9:25–10:40

Go

481, 482. Readings and Research in Speech Communication and Theatre Arts. (3)

First Term/Hours arranged

Staff

Second Term/Hours arranged

Staff

491, 492. Thesis Research. (3,3)

Staff



The Administration

Date following name indicates year of appointment.

James R. Scales (1967)	President
B.A., Oklahoma Baptist; M.A., Ph.D., Oklahoma. Litt.D., Northern Michigan; LL.D., Alderson-Broadbudd; LL.D., Duke; Litt.D., Belmont Abbey	
Edwin Graves Wilson (1946, 1951)	Provost
B.A., Wake Forest; A.M., Ph.D., Harvard	
Manson Meads (1947, 1963)	Vice President for Health Affairs and Director of the Medical Center
B.A., California; M.D., Sc.D., Temple	
John G. Williard (1958)	Vice President and Treasurer
B.S., North Carolina (Chapel Hill); C.P.A., North Carolina	
G. William Joyner Jr. (1969)	Vice President for Development
B.A., Wake Forest	
Russell H. Brantley Jr. (1953)	Assistant to the President and Director of Communications
B.A., Wake Forest	
Thomas E. Mullen (1957)	Dean of the College
B.A., Rollins; M.A., Ph.D., Emory	
Henry Smith Stroupe (1937)	Dean of the Graduate School
B.S., M.A., Wake Forest. Ph.D., Duke	
John D. Scarlett (1955, 1979)	Dean of the School of Law
B.A., Carawba; J.D., Harvard	
Edward L. Felton Jr. (1980)	Dean of the Babcock Graduate School of Management
B.A., Richmond; B.D., Southeastern Baptist Seminary; M.B.A., D.B.A., Harvard	
Richard Janeway (1966)	Dean of the Bowman Gray School of Medicine
B.A., Colgate; M.D., Pennsylvania	
Thomas C. Taylor (1971)	Dean of the School of Business and Accountancy
B.S., M.A., North Carolina (Chapel Hill); Ph.D., Louisiana State; C.P.A., North Carolina	
Percival Perry (1939, 1947)	Dean of the Summer Session
B.A., Wake Forest. M.A., Rutgers; Ph.D., Duke	
David Allen Hills (1960)	Coordinator of Student Services
B.A., Kansas; M.A., Ph.D., Iowa	
Mark H. Reece (1956)	Dean of Men
B.S., Wake Forest	
Lu M. Leake (1964)	Dean of Women
B.A., Louisiana State; M.R.E., Southern Baptist Seminary	
Edward R. Cunnings (1974)	Director of Housing
B.S.M., M.Ed., St. Lawrence	
Michael Ford (1981)	Director of the College Union
B.A., Wake Forest. M.Div., Gordon-Conwell Theological Seminary	

- Linda Kelly (1981) *Summer Resident Director (Second Term)*
B.A., Wake Forest; M.Div., Southwestern Baptist Theological Seminary
- Joseph C. McGill (1981) *Summer Resident Director (First Term)*
B.A., SUNY (Cortland)
- Edgar D. Christman (1956, 1961) *Chaplain*
B.A., J.D., Wake Forest; B.D., Southeastern Baptist Seminary; S.T.M., Union Seminary
- Brian M. Austin (1975) *Director of the Center for Psychological Services*
B.A., Monmouth; M.S.Ed., Ph.D., Southern Illinois
- Mary Ann H. Taylor (1961, 1978) *Director of University Student Health Services*
B.S., M.D., Wake Forest
- Ben M. Seelbinder (1959) *Director of Records and Institutional Research*
B.A., Mississippi Delta State; M.A., Ph.D., North Carolina (Chapel Hill)
- Margaret R. Perry (1947) *Registrar*
B.S., South Carolina
- William G. Starling (1958) *Director of Admissions and Financial Aid*
B.B.A., Wake Forest
- Carlos O. Holder (1969) *Controller and Assistant Treasurer*
B.B.A., Wake Forest
- G. Eugene Hooks (1956) *Director of Athletics*
B.S., Wake Forest; M.Ed., North Carolina (Chapel Hill); Ed.D., George Peabody
- Dorothy Casey (1949) *Director of Women's Athletics*
B.S., Woman's College, North Carolina; M.A., North Carolina (Chapel Hill)



The Summer Faculty

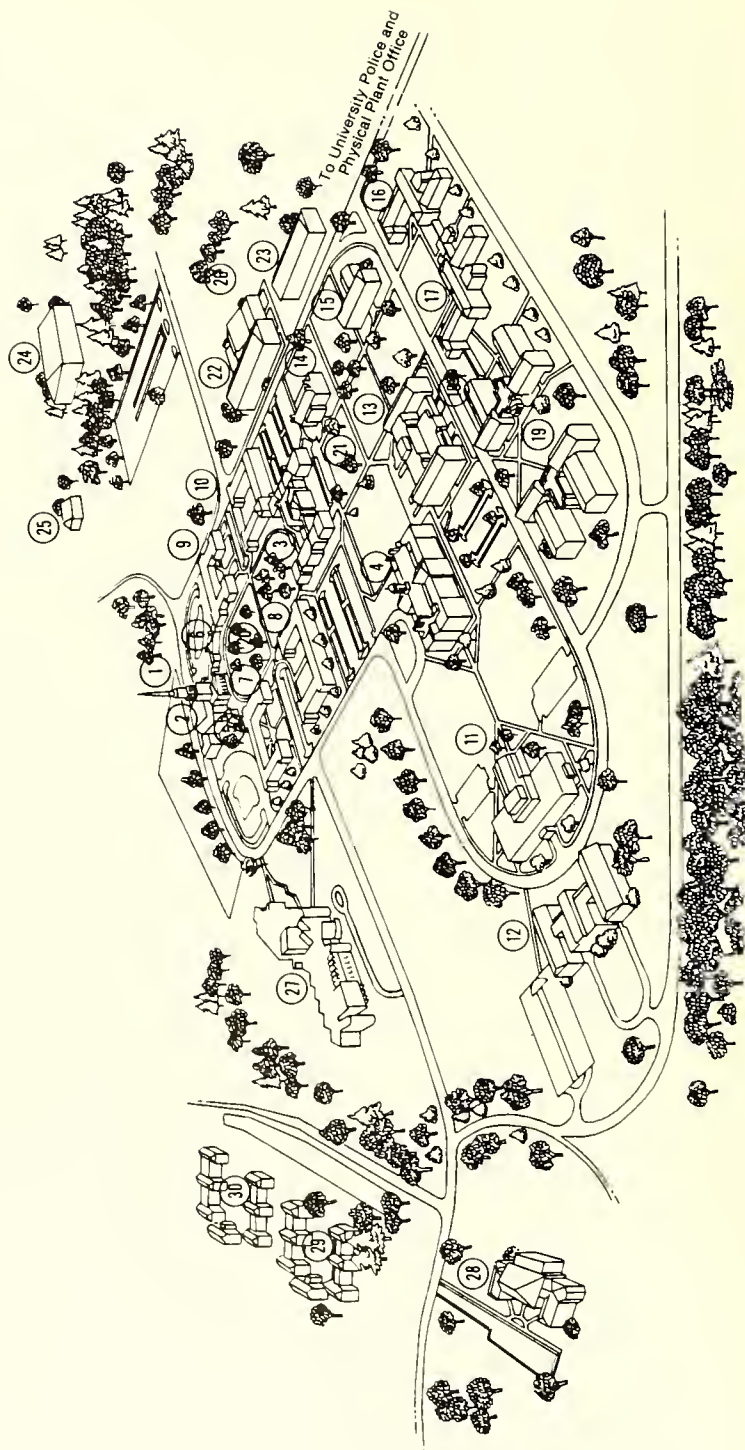
Date following name indicates year of appointment.

- | | |
|--|---|
| Fred Adams
Ph.D., University of Virginia | <i>Visiting Associate Professor of Education</i> |
| E. Pendleton Banks (1954)
B.A., Furman; A.M., Ph.D., Harvard | <i>Professor of Anthropology</i> |
| H. Kenneth Bechtel (1981)
B.A., M.A., North Dakota | <i>Visiting Assistant Professor of Sociology</i> |
| Robert C. Beck (1959)
B.A., Ph.D., Illinois | <i>Professor of Psychology</i> |
| Deborah L. Best (1972, 1978)
B.A., M.A., Wake Forest | <i>Assistant Professor of Psychology</i> |
| Catherine-Anne Beaudry (1981)
B.A., Catholic University; M.A., Columbia | <i>Instructor in Romance Languages</i> |
| David G. Brailow (1979)
B.A., Amherst; M.A., Ph.D., Oregon | <i>Visiting Assistant Professor of English</i> |
| Shasta M Bryant (1966)
B.A., M.A., Ph.D., North Carolina (Chapel Hill) | <i>Professor of Romance Languages</i> |
| Jerry Martin Burger (1980)
B.A., M.S., California State (Fresno); Ph.D., Missouri | <i>Assistant Professor of Psychology</i> |
| Leon P. Cook Jr. (1957)
B.S., Virginia Polytechnic; M.S., Tennessee; C.P.A., Arkansas | <i>Associate Professor of Accountancy</i> |
| Cyclone Covey (1968)
B.A., Ph.D., Stanford | <i>Professor of History</i> |
| Arun P. Dewasthali (1975)
B.S., Bombay; M.S., Ph.D., Delaware | <i>Associate Professor of Business</i> |
| John R. Earle (1963)
B.A., Wake Forest; M.A., Ph.D., North Carolina (Chapel Hill) | <i>Professor of Sociology</i> |
| C. Drew Edwards (1980)
B.A., Furman; M.A., Wake Forest; Ph.D., Florida State | <i>Visiting Assistant Professor of Psychology</i> |
| Leo Ellison Jr. (1957)
B.S., M.S., Northwestern State | <i>Assistant Professor of Physical Education</i> |
| Thomas M. Elmore (1962)
B.A., Wake Forest; M.A., George Peabody; Ph.D., Ohio State | <i>Professor of Counseling Psychology</i> |
| Marcia Epstein
Ph.D., Ohio State University | <i>Visiting Associate Professor of Education</i> |
| Andrew V. Ettin (1977)
B.A., Rutgers; M.A., Ph.D., Washington (St. Louis) | <i>Associate Professor of English</i> |
| David K. Evans (1966)
B.S., Tulane; Ph.D., California | <i>Associate Professor of Anthropology</i> |

-
- Ezequiel B. Evaro (1977) *Instructor in Military Science*
B.A., Armed Forces Institute
- Stephen Ewing (1971) *Associate Professor of Business*
B.S., Howard Payne; M.B.A., Baylor; D.B.A., Texas Tech
- Diana L. Fuguitt (1982) *Assistant Professor of Economics*
B.A. Eckerd; Ph.D. Rice
- Charles V. Ganelin (1980) *Instructor in Romance Languages*
A.B., Denison; M.A., Chicago
- Ivey C. Gentry (1949) *Professor of Mathematics*
B.S., Wake Forest; B.S., New York; M.A., Ph.D., Duke
- Mae Jean Go (1980) *Instructor in Speech Communication*
B.A., Tennessee; M.A., Illinois
- Balkrishna Govind Gokhale (1960) *Professor of History and Asian Studies*
B.A., M.A., Ph.D., Bombay
- William H. Gulley (1966) *Associate Professor of Sociology*
B.A., M.A., Ph.D., North Carolina (Chapel Hill)
- E. Willard Hamrick (1952) *Professor of Religion*
B.A., North Carolina (Chapel Hill); Ph.D., Duke
- Elmer K. Hayashi (1973) *Associate Professor of Mathematics*
B.A., California (Davis); M.S., San Diego State; Ph.D., Illinois
- J. Edwin Hendricks (1961) *Professor of History*
B.A., Furman; M.A., Ph.D., Virginia
- Marcus B. Hester (1963) *Professor of Philosophy*
B.A., Wake Forest; Ph.D., Illinois
- Fred L. Horton Jr. (1970) *Associate Professor of Religion*
B.A., North Carolina (Chapel Hill); B.D., Union Seminary; Ph.D., Duke
- William L. Hottinger (1970) *Professor of Physical Education*
B.S., Slippery Rock; M.S., Ph.D., Illinois
- Fredric T. Howard (1966) *Professor of Mathematics*
B.A., M.A., Vanderbilt; Ph.D., Duke
- Richard P. Hydell (1981) *Assistant Professor of Economics*
B.A., Oberlin; Ph.D., Massachusetts Institute of Technology
- Delmer P. Hylton (1949) *Professor of Accountancy*
B.S., M.B.A., Indiana; C.P.A., Indiana
- John H. Litcher (1973) *Associate Professor of Education*
B.S., Winona State; M.A., Ph.D., Minnesota
- Bruce D. MacQueen (1980) *Visiting Assistant Professor*
B.A., Oklahoma; M.A., California (Santa Barbara) *Classical Languages*
- Jasper L. McBride (1980) *Assistant Professor of Military Science*
B.A., Virginia Polytechnic
- Barry G. Maine (1981) *Instructor in English*
B.A., Virginia; M.A., North Carolina (Chapel Hill)

- Gregorio C. Martín (1976) *Associate Professor of Romance Languages*
Diplome, Salamanca (Spain); M.A., Ph.D., Pittsburgh
- George Matthews Jr. (1979) *Assistant Professor of Physics*
B.S., Ph.D., North Carolina (Chapel Hill)
- J. Gaylord May (1961) *Professor of Mathematics*
B.S., Wofford; M.A., Ph.D., Virginia
- W. Graham May (1961) *Professor of Mathematics*
B.S., Wofford; M.A., Ph.D., Virginia
- Stephen P. Meissier (1981) *Assistant Professor of Physical Education*
B.S., M.S., Rhode Island
- Joseph O. Milner (1969) *Associate Professor of Education*
B.A., Davidson; M.A., Ph.D., North Carolina (Chapel Hill)
- Carlton T. Mitchell (1961) *Professor of Religion*
B.A., Wake Forest; B.D., Yale; S.T.M., Union Seminary; Ph.D., New York
- Carl C. Moses (1964) *Associate Professor of Politics*
A.B., William and Mary; M.A., Ph.D., University of North Carolina (Chapel Hill)
- William M. Moss (1971) *Associate Professor of English*
B.A., Davidson; Ph.D., North Carolina (Chapel Hill)
- Candalas M. Newton (1978) *Visiting Assistant Professor of Romance Languages*
B.A., Salamanca (Spain); M.A., Ph.D., Pittsburgh
- Gillian R. Overing (1979) *Visiting Assistant Professor of English*
B.A., Lancashire (England); M.A., Ph.D., SUNY (Buffalo)
- John E. Parker Jr. (1950) *Professor of Romance Languages*
B.A., Wake Forest; M.A., Ph.D., Syracuse
- Philip J. Perricone (1967) *Associate Professor of Sociology*
B.S., M.A., Florida; Ph.D., Kentucky
- Herman J. Preseren (1953) *Professor of Education*
B.S., California State (Pennsylvania); M.A., Columbia; Ph.D., North Carolina (Chapel Hill)
- Gregory D. Pritchard (1968) *Professor of Philosophy*
B.A., Oklahoma Baptist; B.D., Southern Baptist Seminary; Ph.D., Columbia
- J. Don Reeves (1967) *Professor of Education*
B.A., Mercer; B.D., Th.M., Southern Baptist Seminary; Ed.D., Columbia
- Jon M. Reinhardt (1964) *Associate Professor of Politics*
B.A., Birmingham-Southern; M.A., Ph.D., Tulane
- Mark R. Reynolds (1979) *Instructor in English*
B.A., William and Mary; M.A., Exeter (England)
- Paul M. Ribisl (1973) *Professor of Physical Education*
B.S., Pittsburgh; M.A., Kent State; Ph.D., Illinois
- Charles L. Richman (1968) *Professor of Psychology*
B.A., Virginia; M.A., Yeshiva; Ph.D., Cincinnati
- Leonard P. Roberge (1974) *Assistant Professor of Education*
B.A., New Hampshire; M.A., Atlanta; E.D., Maine

-
- Mariannne A. Schubert (1977) *Visiting Assistant Professor of Psychology*
B.A., Dayton; M.A., Ph.D., Southern Illinois
- Timothy F. Sellner (1970) *Associate Professor of German*
B.A., Michigan; M.A., Wayne State; Ph.D., Michigan
- Franklin R. Shirley (1948) *Professor of Speech Communication*
B.A., Georgetown; M.A., Columbia; Ph.D., Florida
- Robert N. Shorter (1958) *Professor of English*
B.A., Union College; M.A., Ph.D., Duke
- Nancy Shelton (1980) *Visiting Assistant Professor of Education*
B.A., High Point College; M.Ed., North Carolina (Chapel Hill)
- Michael L. Sinclair (1968) *Associate Professor of History*
B.A., Wake Forest; M.A., Ph.D., Stanford
- David L. Smiley (1950) *Professor of History*
B.A., M.A., Baylor; Ph.D., Wisconsin
- J. Howell Smith (1965) *Associate Professor of History*
B.A., Baylor; M.A., Tulane; Ph.D., Wisconsin
- Cecelia H. Solano (1977) *Assistant Professor of Psychology*
B.A., Radcliffe; M.A., Ph.D., Johns Hopkins
- Charles H. Talbert (1963) *Professor of Religion*
B.A., Howard; B.D., Southern Baptist Seminary; Ph.D., Vanderbilt
- Marcellus E. Waddill (1962) *Professor of Mathematics*
B.A., Hampden-Sydney; M.A., Ph.D., Pittsburgh
- Philip L. Washburn *Visiting Instructor in Philosophy*
B.A., Wake Forest
- David S. Weaver (1977) *Assistant Professor of Anthropology*
B.A., M.A., Arizona; Ph.D., New Mexico
- Byron R. Wells (1981) *Instructor in French*
B.A., M.A., Georgia
- John E. Williams (1959) *Professor of Psychology*
B.S., Richmond; M.S., Ph.D., North Carolina (Chapel Hill)
- Frank B. Wood (1971) *Adjunct Assistant Professor of Psychology*
B.A., M.A., Wake Forest; M.Div., Southeastern Baptist Seminary; Ph.D., Duke
- J. Ned Woodall (1969) *Associate Professor of Anthropology*
B.A., M.A., Texas; Ph.D., Southern Methodist
- W. Buck Yearns Jr. (1945) *Professor of History*
B.A., Duke; M.A., Georgia; Ph.D., North Carolina (Chapel Hill)



THE REYNOLDA CAMPUS

1. Wait Chapel (Auditorium and Church)
2. Wingate Hall (Religion and Music)
3. Reynolda Hall (Administration and Student Services)
4. Z. Smith Reynolds Library
5. Eflord Hall (Women)
6. Huffman Hall (Men)
7. Taylor House (Men)
8. Davis House (Men)
9. Poterat House (Men)
10. Kitchen House (Men)
11. Salem Hall (Physical Sciences)
12. Winston Hall (Biological Sciences and Psychology)
13. Tribble Hall (Humanities and Social Sciences)
14. Babcock Hall (Business, Mathematics, and Management)
15. Carswell Hall (Law)
16. Bostwick Dormitory (Women)
17. Johnson Dormitory (Women)
18. Babcock Dormitory (Women)
19. New Dormitory (Women)
20. Upper Plaza
21. Lower Plaza
22. William N. Reynolds Gymnasium
23. Athletic Center
24. Indoor Tennis Center
25. Townhouse Apartments
26. Outdoor Track
27. Scales Fine Arts Center
28. President's Home
29. Faculty Apartments
30. Student Apartments

Bulletins of Wake Forest University

The College

Director of Admissions and Financial Aid
7305 Reynolda Station
Winston-Salem, North Carolina 27109
919-761-5201

The Graduate School

Dean of the Graduate School
7487 Reynolda Station
Winston-Salem, North Carolina 27109
919-761-5301

The School of Law

Director of Admissions
7206 Reynolda Station
Winston-Salem, North Carolina 27109
919-761-5437

The Babcock Graduate School of Management

Assistant Dean for Admissions and Placement
7659 Reynolda Station
Winston-Salem, North Carolina 27109
919-761-5422

The Bowman Gray School of Medicine

Associate Dean for Admissions
300 Hawthorne Road
Winston-Salem, North Carolina 27103
919-727-4265

The Summer Session

Dean of the Summer Session
-7293 Reynolda Station
Winston-Salem, North Carolina 27109
919-761-5664

Marty Lentz, *University Editor*
Terry Hydell, *Assistant*

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Dean of the Summer Session
Wake Forest University
Winston-Salem, North Carolina 27109

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Bulletin of
Wake Forest
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Business and
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The Undergraduate Schools
of Wake Forest University



1982-1983



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of Wake Forest University

Announcements for
1982-1983

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The Calendar

Fall Semester 1982

August	27	Friday	Residence halls open at 8 a.m. for first year students
August	27-31	Friday-Tuesday	Orientation for first year students
August	29	Sunday	Residence halls open at 10 a.m. for transfer students and at noon for returning students
August	29	Sunday	Orientation for transfer students begins at 2 p.m.
August	30, 31	Monday-Tuesday	Registration for all courses
September	1	Wednesday	Classes begin
September	2	Thursday	Opening Convocation
September	14	Tuesday	Last day to add courses
September	28	Tuesday	Last day to drop courses
October	8	Friday	Fall holiday
October	11	Monday	Classes resume
October	22	Friday	Midterm grades due
November	25-28	Thursday-Sunday	Thanksgiving recess
November	29	Monday	Classes resume
December	10	Friday	Classes end
December	11	Saturday	Examinations
December	13-17	Monday-Friday	Examinations
December	18	Saturday	Examinations end
December	19-	Sunday-	Christmas recess
January	12	Wednesday	

1982

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Spring Semester 1983

January	12	Wednesday	Registration halls open at noon
January	13, 14	Thursday,	Registration for all courses
		Friday	
January	17	Monday	Classes begin
January	28	Friday	Last day to add courses
February	3	Thursday	Founders' Day Convocation
February	11	Friday	Last day to drop courses
March	11	Friday	Midterm grades due
March	12-20	Saturday-	Spring recess
		Sunday	
March	21	Monday	Classes resume
April	29	Friday	Classes end
May	2, 3	Monday,	Examinations
		Tuesday	
May	4	Wednesday	Reading Day
May	5-9	Thursday-	Examinations
		Monday	
May	10	Tuesday	Examinations end
May	15	Sunday	Baccalaureate
May	16	Monday	Commencement

1983

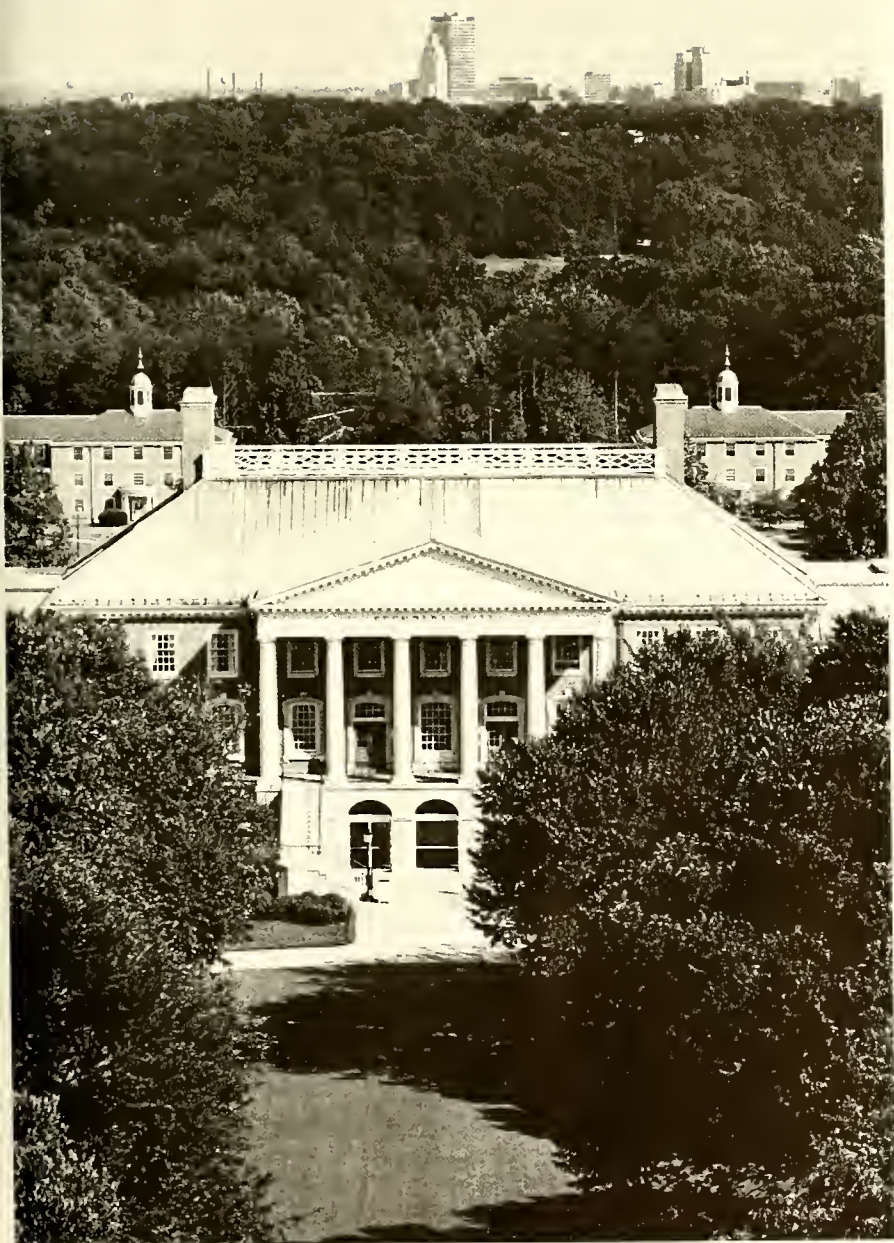
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Reynolda Hall

The University

Wake Forest University is characterized by its devotion to liberal learning and professional preparation for men and women, its strong sense of community and fellowship, and its encouragement of free inquiry and expression.

Founded in 1834 by the Baptist State Convention of North Carolina, the school opened its doors to students on February 3 as Wake Forest Institute, with Samuel Wait as principal. It was located in the Forest of Wake County, North Carolina, on the plantation of Dr. Calvin Jones, near which the Village of Wake Forest later developed.

Rechartered in 1838 as Wake Forest College, it is one of the oldest institutions of higher learning in the state. It was exclusively a college of liberal arts for men until 1894, when the School of Law was established. The School of Medicine, founded in 1902, offered a two-year medical program until 1941. In that year the School was moved from the Town of Wake Forest to Winston-Salem, became associated with the North Carolina Baptist Hospital, and was renamed the Bowman Gray School of Medicine in honor of the benefactor who made possible the move and expansion to a full four-year program. In 1942 Wake Forest admitted women as regular undergraduate students.

A School of Business Administration was established in 1948 and for over two decades offered an undergraduate program of study in business. In 1969 the undergraduate school was succeeded by the Department of Business and Accountancy and the Department of Economics in Wake Forest College; at the same time the Babcock Graduate School of Management was established. In 1980 the undergraduate program in business and accountancy was reconstituted as the undergraduate School of Business and Accountancy. The Division of Graduate Studies was established in 1961. It is now organized as the Graduate School and encompasses advanced work in the arts and sciences on both the Reynolda and Hawthorne campuses in Winston-Salem. The summer session was inaugurated in 1921.

In 1946 the Trustees of Wake Forest College and the Baptist State Convention of North Carolina accepted a proposal by the Z. Smith Reynolds Foundation to relocate the non-medical divisions of the college in Winston-Salem, where the School of Medicine was already established. The late Charles H. Babcock and his wife, the late Mary Reynolds Babcock, contributed a campus site, and building funds were received from many sources. Between 1952 and 1956 the first fourteen buildings were erected in Georgian style on the new Winston-Salem campus. In 1956 the College moved all operations, leaving the 122-year old campus in the Town of Wake Forest to the Southeastern Baptist Theological Seminary.

The decade that followed was the College's most expansive, and in 1967 its augmented character was recognized by the change in name to Wake Forest University. Today enrollment in all schools of the University stands at over 4,500. Governance remains in the hands of the Board of Trustees, and development for each of the six schools of the University is augmented by Boards of Visitors for the undergraduate schools and Graduate School, the School of Law, the Graduate School of Management, and the School of Medicine. A joint board of University Trustees and Trustees of the North Carolina Baptist Hospital is responsible for the

Medical Center, which includes the hospital and the School of Medicine. Alumni and parents' organizations are also active at Wake Forest, and support by the Z. Smith Reynolds Foundation and other foundations and corporations is strong and continuing.

Wake Forest's relationship with the Baptist State Convention is an important part of the school's heritage. Wake Forest's founders proposed to establish an institution that would provide education under Christian influences. The basis for the continuing relationship between the University and the Convention is a mutually agreed-upon covenant which grows out of a commitment to God and to each other. The covenant expresses the Convention's deep interest in Christian higher education and the University's desire to serve the denomination as one of its constituencies. Wake Forest receives financial and intangible support from Convention-affiliated churches.

The College, School of Business and Accountancy, Graduate School, School of Law, and Graduate School of Management are located on the Reynolda Campus in northwest Winston-Salem. The Bowman Gray School of Medicine is about four miles away, near the city's downtown on what is known as the Hawthorne Campus. The University also offers instruction regularly at Casa Artom in Venice, at Worrell House in London, and in other places around the world.

The College offers courses of study leading to the baccalaureate in thirty-nine departments and interdisciplinary areas. The School of Business and Accountancy offers courses of study leading to the baccalaureate in business and in accountancy. The School of Law offers the Juris Doctor and the Graduate School of Management, the Master of Business Administration degree. In addition to the Doctor of Medicine degree, the School of Medicine offers through the Graduate School programs leading to the Master of Science and Doctor of Philosophy degrees in the basic medical sciences. The Graduate School confers the Master of Arts, Master of Arts in Education, and Master of Science degrees in the arts and sciences and the Doctor of Philosophy degree in biology and chemistry.

Buildings and Grounds

Wake Forest is situated on approximately 320 acres; its physical plant consists of over thirty buildings, most of which are of modified Georgian architecture and constructed of Old Virginia brick trimmed in granite and limestone. The Reynolda Gardens annex, consisting of about 150 acres and including Reynolda Woods, Reynolda Village, and Reynolda Gardens, is adjacent to the campus. Nearby is the Graylyn Estate, where there are residential foreign language centers for students.

Wait Chapel is named in memory of the first president of the College. Its main auditorium seats 2,300 and is the home of the Wake Forest Baptist Church; *Davis Chapel* seats 150 and is used by the Church and by the College for smaller services. The Wait Chapel tower contains the Janet Jeffrey Carlile Harris Carillon, an instrument of forty-eight bells. *Wingate Hall*, named in honor of President Washington Manly Wingate, houses the Department of Religion, and the offices of the University Chaplaincy and the Wake Forest Baptist Church.

Reynolda Hall, across the upper plaza from Wait Chapel, is an administration

building and student center. Most administrative offices for the Reynolda Campus are there, along with the College Union, other student activities, and classrooms. The *Z. Smith Reynolds Library* houses the main collection of books and documents on the Reynolda Campus. Along with eight floors of open stacks, having a capacity for about 1,000,000 volumes, it has reading and reference rooms for study and some academic offices.

Winston Hall houses the departments of biology and psychology, *Salem Hall*, the departments of chemistry and physics. Both buildings have laboratories as well as classrooms and special research facilities. *Harold W. Tribble Hall* accommodates the humanities and social science departments and has a curriculum materials center, an honors seminar room, a philosophy library and seminar room, and a larger lecture area, *DeTamble Auditorium*, with an adjacent exhibition gallery. Instruction in business, accountancy, and mathematics is carried out in *Charles H. Babcock Hall*, which also houses the Babcock Graduate School of Management. The School of Law occupies *Guy T. Carswell Hall*.

The *James R. Scales Fine Arts Center* is of contemporary design appropriate to the functions of studio art, theatre, and instruction in art history and drama. Off its lobby is a large gallery for special exhibitions. In the art wing are spacious studios for drawing, painting, sculpture, and printmaking, along with a smaller gallery and classrooms. In the theatre wing are design and production areas and two technically complete theatres, the larger of traditional proscenium design and the smaller for experimental ring productions. The music wing contains a concert and lecture hall, classrooms, practice rooms for individuals and groups, and the offices of the Music Department.

The *William N. Reynolds Gymnasium* is equipped with classrooms for instruction in physical education, courts for indoor sports, a swimming pool, and offices for the Department of Physical Education and for military science. Adjacent are tennis courts, sports fields, a track, an *Indoor Tennis Center*, and the *Athletic Center* for intercollegiate athletics.

There are seven residence halls for undergraduate men: *Kitchin House*, *Poteat House*, *Davis House*, *Taylor House*, *Huffman Hall*, *Palmer Dormitory*, and *Piccolo Dormitory*. For women there are five residence halls: *Bostwick*, *Johnson*, *Babcock*, *New Dormitory*, and *Efird Hall*. Just off the main campus are twelve apartment buildings for faculty and married students. A town house apartment building has also been completed.

Computer Center

Two computers are housed in the University's computer center, located in Reynolda Hall. The eight-year-old Hewlett-Packard 3000III system has one million bytes of memory and 290 million bytes of disk storage. The Prime 750, installed in February, 1982, has three million bytes of memory and 600 million bytes of disk storage. There are terminals for student and faculty use in various campus locations. Students have the opportunity to work with computers for instructional and for research purposes, and can minor in Computer Science.

Computer languages available include FORTRAN, FORTRAN77, BASIC,

COBOL, RPG, ASSEMBLER, PASCAL, and PL/1. Statistical packages such as SPSS, MBDP, and IDA can be used for data analysis.

In addition to the facilities at the computer center and in the adjacent terminal room, a remote batch connection with the Triangle Universities Computing Center (TUCC) and its IBM 3081 makes access to other statistical packages (notably SAS) possible, and makes the programs provided by the North Carolina Educational Computing Service (NCECS) available to Wake Forest computer users. Various departments on campus use microcomputers, primarily PET's and APPLE's, for research and teaching.

Libraries

The libraries of Wake Forest University support research in undergraduate education and in each of the disciplines in which a graduate degree is offered. An endowment provided by a substantial gift from the Mary Reynolds Babcock Foundation and another from Nancy Reynolds has been assigned to the sustained expansion and development of library resources, especially to support the graduate program. The libraries of the University hold membership in the Association of Southeastern Research Libraries.

The library collections total 818,711 volumes. Of these, 624,367 constitute the general collection in the Z. Smith Reynolds Library, 83,112 are housed in the School of Law, 98,761 in the library of the Bowman Gray School of Medicine, and 12,471 in a relatively new library in the Babcock Graduate School of Management. Subscriptions to 9,989 periodicals and serials, largely of scholarly content, are maintained by the four libraries of the University. The holdings of the Z. Smith Reynolds Library also include 24,057 reels of microfilm, 265,303 pieces of microcards, microprint, and microfiche, and 77,045 volumes of United States government publications.

Special collections cover the works of selected late nineteenth and early twentieth century English and American writers, with pertinent critical material, a Mark Twain Collection, a Gertrude Stein Collection, and the Ethel Taylor Crittenden Collection in Baptist History. The recent acquisition of the Charles H. Babcock Collection of Rare and Fine Books represents an important addition to the resources of the Z. Smith Reynolds Library.

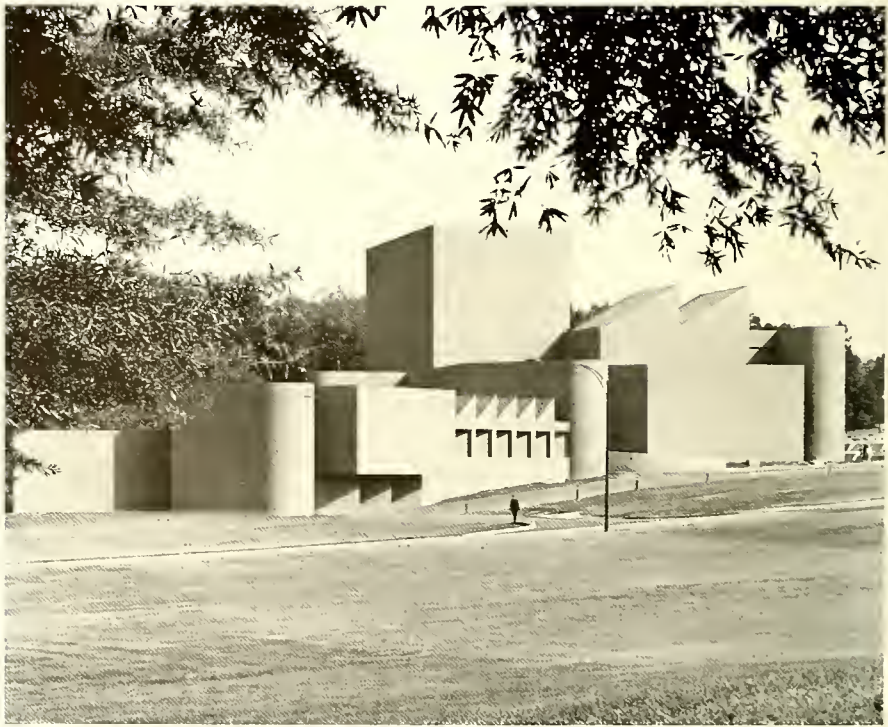
The library instructional program includes an orientation workshop in research methods, assistance in independent and directed studies, and bibliographic presentations as requested by faculty.

Recognition and Accreditation

Wake Forest University is a member of the Southern Association of Colleges and Schools, the Southern Universities Conference, the Association of American Colleges, the Conference of Southern Graduate Schools, and the Council of Graduate Schools in the United States. The University has chapters of the principal national social fraternities, professional fraternities, and honor societies, including Phi Beta Kappa and Sigma Xi. The Bowman Gray School of Medicine is a member of the Association of American Medical Colleges and is on the approved list of the Council

on Medical Education of the American Medical Association. The program in counseling leading to the Master of Arts in Education degree is accredited by the National Council for the Accreditation of Teacher Education.

Wake Forest College was accredited by the Southern Association of Colleges and Schools in 1921. The reaccreditation of 1965 included the master's and doctoral degree programs in the Division of Graduate Studies. Accreditation was reaffirmed in December 1975.



The James R. Scales Fine Arts Center

The Undergraduate Schools

There are two undergraduate schools at Wake Forest University, Wake Forest College and the School of Business and Accountancy. The undergraduate schools are governed by the Board of Trustees and by their respective faculties and administration. Responsibility for academic administration is delegated by the President and Trustees to the Provost, who is chief academic officer of the University. The Deans of the schools are responsible for academic planning and administration for their schools. Collaborating with the Dean of Wake Forest College are associate and assistant deans and the coordinator of student services. Among officers in the area of student services are the deans of men and women, who direct residential, social, and cultural life with the assistance of a professional staff; and the directors of the University Health Service and the Center for Psychological Services. A complete list of administrative offices is found in this bulletin beginning on page 185. In many administrative areas responsibility is shared, or advice is given by the faculty committees listed at the end of this bulletin.



The Rare Book Room in Z. Smith Reynolds Library

Wake Forest College

Wake Forest College is the undergraduate school of arts and sciences of Wake Forest University. It is the center of the University's academic life; through it the University carries on the tradition of preparing men and women for personal enrichment, enlightened citizenship, and professional life.

Wake Forest College is a place of meeting. Its teachers and students are of diverse backgrounds and interests, and that diversity is crucial to the distinctive character of the College. Wake Forest continually examines its educational purpose and evaluates its success in fulfilling it. A formal statement of purpose was prepared as part of the school's decennial reaccreditation process and was adopted by the Board of Trustees.

Purpose

The people who wrote the Statement of Purpose were guided by the history of Wake Forest, particularly the history of its expressed and implied objectives. Their goal was to articulate the attributes which make Wake Forest distinctive.

"We believe," they said, "that Wake Forest should be as good an academy as possible. We believe that diversity should exist in the faculty, staff, and student body and that such diversity is necessary as Wake Forest seeks to meet its educational responsibilities, and as a guide to those who must make the decisions which will determine the school's character in the future."

Following is the official statement of purpose of Wake Forest College.

Statement of Purpose

Wake Forest is a university entrusted with a vital religious heritage and an equally vital tradition of academic freedom. Recognizing the special character of its obligation as an educational institution, Wake Forest assumes the responsibility of insuring that the Christian faith will be an integral part of the University's common life. The University maintains its historic religious perspective through an association with the Baptist churches of North Carolina, the visible symbol and ministry of the campus church, the chaplaincy, and the Christian commitment of individuals within the faculty and administration. At Wake Forest, those who represent this perspective engage in a continuing dialogue with those of other views who join with them in dedication to teaching and learning. Together they assume responsibility for the integrity of the institution and for its commitment to academic excellence.

In keeping with its belief in the value of community, Wake Forest also recognizes an obligation to preserve its atmosphere of mutual respect and of openness to diverse interests and concerns. Its religious heritage, which continues to find expression in tradition, ritual, and convocation, provides unifying and sustaining values beneficial to the whole community. Because of its heritage, Wake Forest fosters honesty and good will, and it encourages

the various academic disciplines to relate their particular subjects to the fundamental questions which pertain to all human endeavor.

Along with the value of community, Wake Forest respects the value of the individual, which it expresses through its concern for the education of the whole person. In view of this concern, a basic curriculum composed of the liberal arts and sciences is essential to the objectives of the College. This means that though the usefulness of professional and technical courses is acknowledged, it is necessary that such courses be related to a comprehensive program of humanistic and scientific studies. In particular, this objective requires an acceptable level of proficiency in those linguistic and mathematical skills which are basic to other pursuits. It also calls for a study of the major contributions from one or more representative areas within the natural sciences, the social sciences, and the humanities, including an examination of integrating disciplines such as religion, philosophy, and history. Such a course of study, when made an essential part of the total offering, prevents the premature specialization which threatens effective communication among the disciplines, and it addresses the fundamental as well as the vocational needs of the student. Wake Forest expects that all of the courses in its curriculum will make significant demands upon the talents of the student and will encourage the development of a humane disposition and an inquiring spirit.

History and Development

Since 1834 Wake Forest College has persevered—sometimes barely—through wars, economic crises, and controversy. In spite of these difficulties, perhaps because of them, the College has developed its distinctive pattern of characteristics: tenacity, independence, a fierce defense of free inquiry and expression, and a concern that knowledge be used responsibly and compassionately.

That these qualities have often been passed along to Wake Forest's students is evident in the lives many have led. That these characteristics have served the school well is displayed by its growth from a small sectarian school to one of the nation's significant small private universities.

A brief history of Wake Forest is useful in understanding the University as it is today and appreciating the process through which it developed.

The founding of Wake Forest College in 1834 was one manifestation of the intellectual and humanitarian reform movement in North Carolina and the nation during the 1830s. The beginnings of the College and the formation of the Baptist State Convention of North Carolina were closely interwoven: a leading motive for the organization of the Convention was that it serve as an agency for establishing an institution that would provide education under Christian influences.

The leaders in the movement for Convention and College were ministers and laymen from diverse backgrounds: Martin Ross, a North Carolinian; Thomas Meredith, a graduate of the University of Pennsylvania; and Samuel Wait, a graduate of Columbian College in Washington, D. C. The inspiration of Ross, the scholarship of Meredith, and the leadership of Wait combined to lead the Baptists of North

Carolina into the formation of the Baptist State Convention on March 26, 1830. Wait was appointed as the Convention's agent to explain to churches, associations, and others the need for a college to provide "an education in the liberal arts in fields requisite for gentlemen."

For nearly three years Wait traveled over the state in his wagon, speaking to a large number of the approximately 15,000 Baptists who lived in the Piedmont and coastal counties. Perhaps as many as one-half opposed missions, education, and other benevolences, but after two years of educational canvassing Wait reported enough sentiment in favor of the program of the Convention to proceed.

A 600-acre plantation, located sixteen miles north of Raleigh, was purchased from Dr. Calvin Jones in 1832 for \$2,000, and the North Carolina Legislature was asked to grant a charter for a literary institution based on the manual labor principle. The lobbying of opponents, both Baptist and non-Baptist, was effective; only the tie-breaking vote of William D. Moseley, speaker of the Senate and a graduate of the University of North Carolina, secured passage of the charter-granting bill. It was a meager charter, subject to various restrictions and limited to a period of twenty years, but the birth of Wake Forest had been achieved. Its subsequent growth would be the result of creative adjustments and successful responses to a series of other challenges.

After his successful three-year canvass of the state, Samuel Wait was elected principal of the new institution. Sixteen students registered on February 3, 1834; before the end of the year seventy-two had enrolled. The manual labor principle, adopted as a partial means of financing the institution, was abandoned after five years, and the school was rechartered in 1838 as Wake Forest College.

The economic crisis of 1837 had such an adverse effect that support for the College and student enrollment steadily declined; only a loan of \$10,000 from the State Literary Fund in 1841 prevented bankruptcy. During these years of arduous struggle to keep the College alive, President Wait exhausted his physical strength and contracted an illness which forced him to resign the presidency in 1845.

William Hooper succeeded Wait, and the prospects of the College became brighter. Hooper, a grandson of one of North Carolina's three signers of the Declaration of Independence, had received his education at the University of North Carolina. As a native North Carolinian with family connections extending over several generations, he was able to mobilize public opinion in support of the College.

After Hooper's resignation the Trustees elected to the presidency Professor of Mathematics John B. White, a graduate of Brown University. Since the mortgages on the physical facilities had been paid during Hooper's tenure, fund raising efforts during President White's administration could be concentrated on increasing the College endowment. The Trustees authorized a capital campaign and selected as its leader Washington Manly Wingate, an 1849 graduate who within a year and a half raised approximately \$33,000.

But the temper of the times was unsuited to leadership by a Northerner, and President White resigned in 1854. The Trustees chose as his successor Wingate, then twenty-six years old and the first alumnus of the College to serve as president. Under his vigorous leadership, which spanned nearly three decades, the quality of students improved and new faculty members were added. During the first eight years of Wingate's administration, sixty-six students graduated—more than half of the total

graduated during the first twenty-three years in the life of the College. In 1857 President Wingate launched a campaign to produce an additional endowment of \$50,000, over one-half of which was raised in a single evening during the 1857 meeting of the Convention.

This period of growth and expansion was cut short by the division of the nation in 1861. The Conscription Act of 1863 did not exempt students, and for three years of the Civil War the College suspended operations. The buildings were used briefly for a girls' school; after 1863 the Confederate government used College facilities as a military hospital.

Following Sherman's march through the South and Lee's surrender at Appomattox, a peace of desolation pervaded the region. Supporters of Wake Forest surveyed what remained: College buildings, now leaky and in poor repair; approximately \$11,700 from a pre-war endowment of \$100,000; the former president and faculty; a loyal group of trustees. There was also something else; an indomitable spirit of determination that Wake Forest should emerge from the wreck of war and fulfill its mission.

The needs of the College were great and financial prospects poor, but in November 1865, barely six months after the end of the war, nine members of the Board of Trustees, acting with unwarranted courage, authorized the resumption of classes. Wingate was persuaded to resume the presidency, and on January 15, 1866, fifty-one students enrolled. The number increased as the South and its economy slowly recovered.

President Wingate realized that the people of North Carolina had to be awakened to the need for education in the nascent south, and that they must be persuaded that Wake Forest could help serve that need. To launch this campaign, a Baptist-sponsored, statewide educational convention was held in Raleigh, but before funds could be collected, the financial crisis of 1873 ended all immediate hope for endowment. The failure of the 1873-74 fund raising campaign placed the College in a precarious position. The triple encumbrances of war, reconstruction, and financial panic made it evident that little money could be raised in North Carolina. The Committee on Endowment of the Board of Trustees appointed James S. Purefoy, a local merchant and Baptist minister, as agent to solicit funds in the Northern states for continued operation of the College. While serving as treasurer of the Board before the war, he had salvaged \$11,700 from the pre-war endowment of \$100,000 by persuading the Trustees to invest half of the endowment in state bonds. After two years of unrelenting and often discouraging labor, without remuneration, he placed in the hands of the Trustees the sum of \$9,200.

It was also in the bleak days of financial uncertainty that a Wake Forest student, James W. Denmark, proposed and founded the first college student loan fund in the United States. A Confederate veteran, Denmark had worked six years to accumulate enough money for his own college expenses. Soon after entering Wake Forest in 1871 he realized that many students had the same great financial need. From his meager funds he spent five dollars for post cards and wrote to college presidents across the country asking how their loan funds were organized. When he found that the colleges had none, he enlisted the support of faculty and students at Wake Forest and in 1877 persuaded the Legislature to charter the North Carolina Baptist Student

Loan Fund. Now known as the James W. Denmark Loan Fund, it is the oldest college student loan fund in the United States and has assets of \$325,000 to serve the needs of students according to the purposes of its founder.

By the close of President Wingate's second administration in 1879, the College had been successfully revived. The endowment had been increased and new construction had begun. Perhaps the greatest service President Wingate rendered was bringing to the College a faculty of highly qualified scholars who served the College with distinction and dedication over many years. Among them were Professors William G. Simmons (1855–88), William Royall (1859–70; 1880–92), William Bailey Royall (1866–1928), Luther Rice Mills (1867–1907), and Charles Elisha Taylor (1870–1915), who served as president from 1884 to 1905. Two other scholars who became tutors or adjunct professors in the last year of President Wingate's administration were also destined to play important roles in the life of the College: Needham Y. Gulley, who established the School of Law in 1894 and served as its first dean for thirty-six years, and biologist William Louis Poteat, who served the College for fifty years, twenty-two of them as president.

The administration of President Thomas Henderson Pritchard, which followed that of President Wingate, was brief and served principally to further Wingate's efforts to persuade Baptists and other North Carolinians to improve the deplorable condition of education in the state. The second alumnus of the College to serve as president, Pritchard was an eloquent speaker whose prominent leadership among Baptists increased the patronage of the College and improved its image among its constituency.

Charles Elisha Taylor, whom President Wingate had brought to the faculty in 1880, was elected in 1884 to serve as the sixth president.

Taylor's administration from 1884 to 1905 brought enrichment of the academic program in a variety of ways. Academic departments were increased from eight to thirteen, and the size of the faculty more than doubled. Two new schools were added: the School of Law in 1894 and the School of Medicine in 1902. Progress in other areas included the addition of buildings and the landscaping of the campus. Over 400 trees were planted, making *Magnolia grandiflora* almost synonymous with the Wake Forest campus.

President Taylor was succeeded by William Louis Poteat. Affectionately known as "Doctor Billy" to students during and after his twenty-two year administration, he continued to promote the general growth of all areas of College life. Special emphasis was placed on development in the sciences, reflecting in part the interests of the president and in part the need to enrich the pre-medical training required by the new School of Medicine.

As student enrollment increased from 313 in 1905 to 742 in 1927, there was a corresponding increase in the size of the faculty. Registration in religion, English, education, and the social sciences required more administrative direction, and a dean and a registrar were employed along with a library staff. Propelled by the trend of the other colleges in the state, Wake Forest gave more attention to sports and achieved an envied reputation in baseball and football. Also notable during President Poteat's administration was the continued growth of the endowment.

Beyond these significant material advances, President Poteat brought distinction

in the form of state and national recognition. A devout Christian, an eloquent speaker, and an accomplished scholar, he became a national leader in education and probably the foremost Baptist layman in the state. As a distinguished scientist he was among the first to introduce the theory of evolution to his biology classes. The Christian commitment in his personal and public life enabled him to defend successfully his views on evolution before the Baptist State Convention in 1922, in a major victory for academic freedom that attracted nationwide attention. Through his influence and that of Wake Forest alumni who supported his view, the North Carolina Legislature refused to follow other Southern states in the passage of anti-evolution laws in the 1920s.

During the administration of Poteat's successor, Francis Pendleton Gaines (1927–1930), the academic program continued to improve. In 1930 the Trustees selected Thurman D. Kitchin, dean of the medical school, to fill the presidency. Kitchin was a member of a family prominent in state and national affairs: one brother, William W. Kitchin, had served as governor of North Carolina; another, Claude Kitchin, had served as majority leader in the United States House of Representatives. Kitchin's twenty-year administration was one of progress in the face of many obstacles—Depression, destructive campus fires (one of which destroyed venerable Wait Hall), the disruption caused by World War II, and a depleted student body.

Notable accomplishments during this period were the approval in 1936 of the School of Law by the American Bar Association and in 1941 the removal of the School of Medicine to Winston-Salem, where it undertook full four-year operation in association with the North Carolina Baptist Hospital as the Bowman Gray School of Medicine, named after the benefactor whose bequest made expansion possible.

World War II brought other changes. Although the College was able to remain open, enrollment dropped in 1942 to 474. The College met this crisis by modifying its century-old admissions policy and becoming a coeducational institution that year. In the post-war period, enrollment mushroomed with the return of the veterans and reached a peak of 1,762 by 1949. Just before World War II a \$7,000,000 capital expansion campaign for buildings and endowment had been launched by President Kitchin. The war forced the postponement of construction, but out of the campaign came a proposal which offered another war-ridden Wake Forest an opportunity for yet another rebirth. The Z. Smith Reynolds Foundation proposed that up to \$350,000 a year of its income (an amount which has steadily increased over the years) be given in perpetuity to the College, provided that the entire College be relocated in Winston-Salem and that other friends of the College provide a campus site and buildings. In 1946 the Board of Trustees, the Convention, and the Baptist constituency of the state accepted the Reynolds proposal. Charles H. Babcock and his wife Mary Reynolds Babcock offered a 320-acre tract of their Reynolda estate as a site for the new campus.

To move an institution over 100 years old from its rural setting 110 miles to a new campus in an urban area required leadership of great vision, determination, and youthful vigor. To succeed President Kitchin, who retired on his sixty-fifth birthday, the Trustees in 1950 elected to the presidency Harold Wayland Tribble, then president of Andover Newton Theological School and a noted Baptist theologian.

President Tribble immediately began to mobilize alumni and friends of the College and the Baptist State Convention, in support of the great transition.

In the spring of 1951, William Neal Reynolds and Nancy Reynolds offered an anonymous challenge gift of \$2,000,000 on condition that the College raise \$3,000,000 by June 30, 1952. The deadline was extended and the challenge met by January 1953. Mr. Reynolds died in September 1951 (the Foundation assumed his \$1,500,000 share of the challenge grant) and he willed Wake Forest \$1,000,000, to be paid at the time of removal. In recognition of his bequest the new gymnasium was named for him. Because of the capital funds received from the Reynolds Foundation, the Trustees voted that the library be named the Z. Smith Reynolds Library and the administration building Reynolda Hall.

Groundbreaking ceremonies were held in Winston-Salem on October 15, 1951, when a crowd of more than 20,000 watched President Harry Truman lift the first shovel of dirt to begin construction of the new Wake Forest campus. Between 1951 and 1956 fourteen buildings were erected; the removal of the College to its new home was accomplished in time for the opening of the summer session in 1956.

During the next eleven years of President Tribble's administration the College experienced many changes. It had revised its curriculum before moving to the new campus, offering greater flexibility to students, whose number increased to 3,022. The size of the faculty expanded, reducing the student/teacher ratio to fourteen-to-one.

Additional resources came to the College in its new home. In 1954 the will of Colonel George Foster Hankins provided over \$1,000,000 to be used for scholarships. In 1956 the Ford Foundation contributed \$680,000 to the endowment of the undergraduate program and \$1,600,000 to the Bowman Gray School of Medicine. After the completion of a challenge gift of \$3,000,000 offered in 1965, the Foundation raised its annual contribution to \$620,000. The holdings of the University's libraries more than tripled, and the Z. Smith Reynolds Library was awarded the income from an endowment fund of \$4,500,000 contributed by the Mary Reynolds Babcock Foundation and Nancy Reynolds.

Graduate work, first offered in 1866 but suspended during the removal program, was resumed in 1961 with the establishment of the Division of Graduate Studies. In 1967, recognizing the augmented resources of the College, the Trustees officially changed the institution's name to Wake Forest University. The Division of Graduate Studies became the Graduate School and the name Wake Forest College was retained as the designation for the undergraduate school.

After seventeen years of strenuous effort, President Tribble retired in 1967, leaving as his lasting memorial the removal of the College from Wake Forest to Winston-Salem and its changed status from college to university, with enhanced resources and academic distinction. As his successor the Trustees chose James Ralph Scales, former president of Oklahoma Baptist University and former dean of arts and sciences at Oklahoma State University. Since his administration began there have been important new developments. The Guy T. and Clara H. Carswell Scholarship Fund, valued at \$1,600,000, was established in 1967 in support of the undergraduate college. The new Graduate School of Management in 1969 was named in honor of Charles H. Babcock. Through the generosity of the Z. Smith Reynolds Foundation

and Nancy Reynolds, a building was constructed to house the Babcock School; a subsequent gift of \$2,000,000 was received from the Mary Reynolds Babcock Foundation for endowment. The James R. Scales Fine Arts Center was opened in 1976, marking a major phase of the College's growth in comprehensive liberal arts education. An athletic center and additions to the School of Law building, Guy T. Carswell Hall, have further expanded the physical resources of the Reynolda Campus.

Wake Forest has expanded its programs as well as its physical facilities. The University offers study for the baccalaureate degree in over thirty areas listed on page 59. Exchange programs with local institutions and with universities abroad have further expanded the range of choice and opportunity. In addition, Wake Forest maintains residential centers in Venice and London for foreign study within the college curriculum.

Further development planned by Scales' administration is in the areas of increasing endowment for many parts of the University and completing construction of the Fine Arts Center with the addition of a music wing.



The Old Campus

Student Life

Student life at the University is designed to offer a wide range of social, cultural, religious, and athletic resources to complement academic studies. The University is a community, and the sense of community is fostered by rich opportunities for personal growth.

Student Government has jurisdiction over all undergraduate students. The College Union plans, directs, and funds activities. Men's social fraternities and women's societies are governed by the Interfraternity and Intersociety Councils respectively. A Residence House Council and a Women's Residence Council represent all students who live on campus. There are chapters of the major honor societies and professional societies for qualified students, and the University makes a number of academic awards for distinguished student achievement and service. Intercollegiate athletics for men and for women and an intramural sports program are strong, distinguished by tradition and by performance. Religious activities are central to the life of the University and, like campus cultural opportunities, are distinctive. The University offers a number of additional services to students relating to their physical and mental health, spiritual growth, and preparation for life.

Student Government

The executive branch of the Student Government is comprised of the four student body officers—president, vice president, secretary, treasurer—and the executive advisory committees. Reporting directly to the officers are various committees which work on improving service to students. These committees are open to all students.

The *Student Legislature* is composed of fifty-five student representatives; the vice president of the student body serves as speaker. The Legislature represents the interests of students in social and academic matters and promotes and funds projects of benefit to the student body and the larger community. It oversees disbursement of funds to student groups and recommends the chartering of newly formed student organizations. Major committees are the Charter Committee, the Student Budget Advisory Committee, and the Student Economic Board.

The *Honor Code* is an expression of the concern that students act with honor and integrity. It is an integral part of the Student Government as adopted by students and approved by the faculty. Its essence is that each student's word can be trusted implicitly and that any violation of a student's word is an offense against the whole community. The honor system obligates students neither to give nor receive aid on any examination, quiz, or other pledge work; to have complete respect for the property rights of others; not to make false or deceiving statements regarding academic matters to another member of the University community, nor to give false testimony or refuse to pay just debts; and to confront any student who has violated the honor system and tell him or her that it is his or her responsibility to report himself or herself or face the possibility of being reported to the Honor Council.

The *Honor Council* consists of ten members—two co-chairmen selected by the

Honor Council of the previous year plus two representatives from each class. There are three non-voting faculty advisers.

It is the duty of the Honor Council to receive, prefer, investigate, and arrange trial proceedings for all charges of violations of the Honor Code. A student who is found guilty of premeditated cheating is immediately suspended or expelled from the University. For convictions of lying, stealing, bad debts, interfering with the Honor Council, or other forms of cheating, the maximum penalty is expulsion and the minimum penalty is probation. Expulsion is automatic upon conviction for a second offense. All actions of the Honor Council are reported in writing to the Dean of the College or the Dean of the School of Business and Accountancy.

Any student convicted of violating the Honor Code is ineligible to represent the University in any way until the period of punishment—whether suspension, probation, or another form—is completed and the student is returned to good standing. A student who has been suspended can be readmitted to the College only on the approval of the faculty or its Committee on Academic Affairs. During the period of suspension the student cannot be certified to another institution as being in good standing.

The *Case Referral Panel* receives reports on violations of regulations, conducts necessary investigations, and draws up specific charges. Certain cases are referred to the Director of Housing. Otherwise, where a plea of guilty is entered, the Case Referral Panel levies a penalty. If a plea of not guilty or no plea is entered, the case is forwarded to the Student Judicial Board.

The *Student Judicial Board* is composed of twelve members, at least three men and three women, who are elected at large from the student body. It is the duty of the board to receive, prefer, and try all charges of social misconduct and violations of University rules and regulations for individual students as well as student organizations not covered by the Honor Council, the Director of Housing, or the Traffic Appeals Board. A student who violates these regulations or who behaves in such a way as to bring reproach upon him/herself or upon the University is subject to penalties ranging from verbal reprimand to suspension on the first offense. For further offenses, expulsion may occur.

College Union

Under the Director of the College Union there are meeting and recreation rooms, lounges, offices for student organizations, a coffee house, and an information center. The College Union is responsible for scheduling entertainment activities, developing and presenting programs to complement academic studies, assisting student organizations, and providing supporting equipment and services. The College Union board of directors, representing all undergraduate and graduate students, cooperates with the staff in daily operations and supervises the efforts of a large body of student volunteers.

Residence Councils

The Residence House Council includes all residents and encourages students

toward a comprehensive concept of education, on the principle that learning is not restricted to the classroom but occurs in important ways through interaction with fellow students and faculty in residence hall life. Each house has its own officers and carries out its own academic, athletic, and social programs to give students an opportunity to become actively involved in college life.

The Women's Residence Council is concerned with nurturing a comprehensive concept of education. Occasions are provided for discussions and social and sport events. The Women's Residence Council officers are elected by students who live in the residence halls.

Interfraternity and Intersociety Councils

The Interfraternity Council is the governing body of twelve social fraternities: Alpha Phi Alpha, Alpha Sigma Phi, Delta Sigma Phi, Kappa Alpha, Kappa Sigma, Lambda Chi Alpha, Omega Psi Phi, Pi Kappa Alpha, Sigma Chi, Sigma Phi Epsilon, Sigma Pi, and Theta Chi. The purpose of the council is to maintain a high standard of conduct and scholarship. A student must have a C average for the previous semester or a cumulative C average to be initiated. By order of the faculty, students who are on probation for any reason may not be initiated into any fraternity until the end of their probationary period.

The Intersociety Council is the governing body of six societies for women, in each of which membership is selective: Fideles, Lynks, Sophs, Steps, Strings, and Thymes.

Honor Societies and Professional Fraternities

A number of nationally affiliated honor societies have been established: Alpha Epsilon Delta (pre-medicine), Beta Beta Beta (biology), Delta Phi Alpha (German), Delta Sigma Rho/Tau Kappa Alpha (debate), Eta Sigma Phi (classics), Lambda Alpha (anthropology), National Collegiate Players and Anthony Aston Society (drama), Omicron Delta Epsilon (economics), Phi Alpha Theta (history), Pershing Rifles and Scabbard and Blade (military), Phi Beta Kappa, Omicron Delta Kappa, and Mortar Board. There are student sections of the American Institute of Physics and the American Chemical Society; professional fraternities include Phi Alpha Delta and Phi Delta Phi (law). There are also chapters of the national service fraternities Alpha Phi Omega and Circle K, as well as an Accounting Society, the American Marketing Association, a Physical Education Club, a Politics Club, and a Sociology Club.

Academic Awards

The following awards are made annually: the *A. D. Ward Medal* for the senior making the best address at commencement; the *J. B. Currin Medal* for the best oration on the topic "Christ in Modern Life"; the *D. A. Brown Prize* to the student whose writing most merits recognition; the *M. D. Phillips Prize* to the outstanding senior in Greek or Latin; the *John Y. Phillips Prize* to the outstanding senior in mathematics; the *H. Broadus Jones Award* to the student whose paper shows greatest insight into the works of Shakespeare; the *Ruth Foster Campbell Award* to the student whose ability in

the Spanish language and spirit of joyful inquiry into Spanish culture have been most outstanding; the *Forrest W. Clonts Award* to the outstanding senior in history; the *Laud H. Richards Award* to the outstanding senior in politics; the *John Allen Easley Medal* to the outstanding senior in religion; the *Lura Baker Paden Medal* to the outstanding senior in business; the *Wall Street Journal Medal* and a year's subscription to the *Journal* to the outstanding senior in finance; the *A. M. Pullen and Company Medal* to the senior with the highest achievement in accounting; the *William E. Speas Award* to the outstanding senior in physics; the *Carolina Award* to the major in biology who writes the best paper on a subject selected by the national biology society; the *Biology Research Award* to the major in biology who does the best piece of original research; the *Poteat Award* to the student in first year biology who plans to major in biology and judged most outstanding.

The *William C. Archie Award*, established by a grant from Mrs. William C. Archie and Dr. and Mrs. William C. Archie Jr., is given each year to the graduating senior who, in the opinion of the Dean of the College and a faculty committee appointed by the Dean, has shown most conspicuously a commitment to liberal learning, to scholarship, and to the ideals of Wake Forest College. In odd-numbered years the award is presented to a woman student; in even-numbered years it is presented to a male student.

Intramural Athletics

The intramural program operates under the auspices of the Department of Physical Education. It provides a variety of competitive activities for students, faculty, and staff. There are sports for male, female, and coed participation. Activities usually included in the intramural program are basketball, cross-country, football, golf, handball, racketball, soccer, softball, swimming, tennis, volleyball, water polo, wrestling, and weight lifting.

Students occasionally organize club teams for other sports and activities, which are not taught or directed by the College, but which are conducted as student organizations with the approval of Student Government. These have included rugby, karate, ice hockey, field hockey, hiking, rappelling, general conditioning, dance, and synchronized swimming. Students who are interested in a sport not offered through the College may organize themselves and petition the Student Government for approval.

Intercollegiate Athletics

Under the Director of Athletics, Wake Forest is a member of the Atlantic Coast Conference of the National Collegiate Athletic Association and participates in intercollegiate football, basketball, baseball, golf, tennis, soccer, cross-country, and track. Under the military science staff there is also an intercollegiate program in riflery. The full scholarship allowed by the National Collegiate Athletic Association covers tuition, fees, room, board, and books. Wake Forest offers several special scholarships and awards: the *Brian Piccolo Award* for the football player judged by the coaching staff to best exemplify the qualities of Brian Piccolo during the annual North Carolina game; the *Brian Piccolo Scholarship* for the Chicago-area high school football

player entering Wake Forest who best exemplifies the qualities of Brian Piccolo; the *Arnold Palmer Award* for the Wake Forest Athlete of the Year, as judged by the Monogram Club; the *Buddy Worsham Scholarship* for one golfer or more; the *John Knott Scholarship* for one golfer or more.

Under the Director of Women's Athletics, Wake Forest is a member of the Association of Intercollegiate Athletics for Women and participates in basketball, field hockey, golf, tennis, volleyball, cross-country, and track.

The full scholarship allowed by the Association of Intercollegiate Athletics for Women covers tuition, fees, room, and board. Wake Forest offers scholarships for women in golf, tennis, basketball, volleyball, and cross-country.

Religious Activities

The Campus Ministry provides a variety of religious activities, including Thursday morning worship in Davis Chapel. In addition to seasonal celebrations throughout the liturgical year, there are retreats, Bible-study and discussion groups, and both independent and church-related social service in the larger community. Baptist, Catholic, Episcopal, and Methodist chaplains represent their faiths and participate jointly in sponsoring activities. Wake Forest Baptist Church meets for weekly worship in Wait Chapel and embraces students, faculty, and members of the larger community. Membership is open without restriction to all who seek its ministry.

The Ecumenical Institute sponsors lectures, colloquia, and publications which foster dialogue among clergy and lay members of Catholic, Jewish, and Protestant faiths. Most are open to students and to others in the community.

Cultural Activities

The University Theatre presents four major productions and several lab plays annually, employing faculty, student, and visiting professional directors. Each year the College Union, with the assistance of the University Theatre, sponsors a music dinner theatre, directed and performed by students. WFDD-FM broadcasts year-round to the campus and Piedmont North Carolina as an affiliate of National Public Radio. In addition to student announcers, producers, and technicians, it has a small professional staff. Intercollegiate debate at Wake Forest has a long record of excellence, and the College hosts two annual debate tournaments, the Novice and the Dixie Classic.

Student publications include *Old Gold and Black*, a weekly newspaper; *The Student* literary magazine; and *The Howler*, the yearbook. The College Union sponsors major speaker series throughout the academic year, and departments in the College engage specialists for other series. The *Institute of Literature* is a program of writers, critics, and scholars in English, classical languages, German, and Romance languages. The *Hester Philosophy Seminar* is an annual colloquium devoted to the major problems of philosophy and their impact on the Christian faith and is a joint undertaking of the Department of Philosophy and the Ecumenical Institute. The *Robinson Lectures* are held biennially and are administered by the Department of Religion. The Department of Psychology sponsors a colloquium series throughout the academic year.

Student musicians perform for academic credit in the Choral Union, the Concert Choir, the Opera Workshop, the University Symphony, the Demon Deacon Marching Band, the Symphonic Wind Ensemble, the Concert Band, the Jazz Ensemble, the Percussion Ensemble, the Woodwind Quintet, the Brass Quintet, the Madrigal Singers, and the Collegium Musicum.

Under the Director of Concerts, major concerts in the Artists Series are performed in Wait Chapel by orchestras and artists from around the world. Visiting dance troupes and companies are scheduled in the James R. Scales Fine Arts Center, and recitals are played by both students and guest carillonners on the Janet Jeffrey Carillon. Students in the Chapel Bell Guild play English handbells for convocations and services in Wait Chapel. The Department of Music sponsors performances by faculty members, students, and visiting artists in most areas of applied music instruction.

All concerts are open to students and to others in the community.

In addition to studio instruction in the Department of Art, visiting painters, sculptors, and printmakers teach on campus and at the nearby Southeastern Center for Contemporary Art, sponsored jointly by the University and the Center. Reynolda House has a regular program of instruction in art history related to its special collection in American art. The College Union has an expanding collection of contemporary works of art, under student administration and exhibited in Reynolda Hall and elsewhere on campus. The T. J. Simmons Collection of paintings, etchings, engravings, and sculpture is also distributed for permanent campus display. An active group of student photographers exhibits its own work and that of professional photographers in the gallery adjacent to DeTamble Auditorium. Cultural resources in the community, in addition to Reynolda House and the Southeastern Center for Contemporary Art, include the historic restored Moravian village of Old Salem, the Museum of Early Southern Decorative Arts, the North Carolina School of the Arts and its associated professional performing companies in theatre, dance, and music, and the Winston-Salem Symphony and Chorale. Folk art, professional art, and crafts programs are frequent.

Educational Planning and Placement

The Office for Educational Planning and Placement (Room 7 Reynolda Hall) offers counseling and consultation over the entire range of educational planning. Assistance is available in the choice of an academic major and in approaching other decisions that relate to professional or career commitments. Undergraduate and graduate students are invited to take advantage of these services. The office provides extensive library resources for use by students involved in the planning and placement activities. Interviews with potential employers may be arranged through the office.

Center for Psychological Services

Located in Reynolda Hall, the Center for Psychological Services offers psychological counseling, testing, and research services to the University community.

Student Health Service

The Student Health Service is located in Kitchin House and provides primary care services, including general health maintenance, diagnostic and treatment procedures, and referral to specialists. It is open when residence halls are in operation and requires a health information questionnaire on file for all students. The services of the clinical staff are covered by tuition; there are additional charges for injection medications, laboratory tests, special physical examinations, and bed care.



Procedures

All students are responsible for familiarizing themselves with the portions of this bulletin which pertain to their course of study. Statements concerning courses and expenses are not to be regarded as irrevocable contracts between the student and the institution. The University reserves the right to change the schedule of classes and the cost of instruction at any time within the student's term of residence.

Admission

Candidates for admission must furnish evidence of maturity and educational achievement. The Committee on Admissions carefully considers the applicant's academic records, scores on tests, and evidence of character, motivation, goals, and general fitness for study in the College. The applicant's secondary school program must establish a commitment to the kind of broad liberal education reflected in the academic requirements of the College.

Admission as a freshman normally requires graduation from an accredited secondary school with a minimum of sixteen units of high school credit. These should include four units in English, three in mathematics, two in history and social studies, two in a single foreign language, and one in the natural sciences. An applicant who presents at least twelve units of differently distributed college preparatory study can be considered. A limited number of applicants may be admitted without the high school diploma, with particular attention given to ability, maturity, and motivation.

All persons admitted are required to submit a health history, along with the results of a physical examination and certain laboratory tests to the Director of the Student Health Service. If a person who has been accepted but has not yet enrolled has or develops a health problem which, in the judgment of the Director of the Health Service, creates a danger to the safety and well-being of the student or others, that person may be required to delay matriculation until the problem is resolved.

Application

An application is secured from the Office of Admissions in person or by mail (7305 Reynolda Station, Winston-Salem, North Carolina 27109). It should be completed and returned to that office, if possible no later than February 1 for the fall semester. Most admissions decisions for the fall semester are made by March 1, with prompt notification of applicants. For the spring semester application should be completed and returned, if possible no later than October 15. Except in emergency the final date for applying for the fall semester is August 5 and for the spring semester January 1. Application on this last-date basis is primarily for non-residential students.

The admission application requires records and recommendations directly from secondary school officials. It also requires test scores, preferably from the senior year, on the Scholastic Aptitude Test of the College Entrance Examination Board. An accompanying Achievement Test is optional. A \$20 fee to cover the cost of processing must accompany an application. It cannot be applied to later charges for

accepted students or refunded for others. *The University reserves the right to reject any application without explanation.*

A \$200 admission deposit is required of all students accepted and must be sent to the Office of Admissions no later than three weeks following notice of acceptance. It is credited toward first semester fees and is refunded in the event of cancellation of application by the student, provided written request for refund is received by the Office of Admissions no later than May 1 for the fall semester or November 1 for the spring semester. (Students notified of acceptance after May 1 for the fall semester or November 1 for the spring semester should make the admission deposit within two weeks of notification.) Deposits made after May 1 and November 1 are not refundable. Failure to make the admission deposit is taken as cancellation of application by the student. No deposit is required for summer session enrollment.

Early Decision

An Early Decision plan is available to well qualified high school students who decide by the close of their junior year that their first college choice is Wake Forest. An Early Decision agreement is required with the application, which is sent to the Office of Admissions after completion of the junior year or by late October of the senior year. Along with high school record, recommendations, and scores on the Scholastic Aptitude Test, at least one Achievement Test, especially in English composition, is strongly recommended.

Early Decision applicants are notified of acceptance no later than November 1 for the fall semester, and the admission deposit is required by January 1. Applicants not admitted are asked to submit a senior year Scholastic Aptitude Test score and first semester senior year grade record, or are advised to apply elsewhere.

Admission of Handicapped Students

Wake Forest College will consider the application of any student on the basis of his or her personal and academic merit, regardless of physical handicap. Though the campus has several levels, a system of ramps and elevators makes all its programs available to those in wheelchairs or with limited mobility. The University will gladly help handicapped students make arrangements to meet special needs. Students who seek further information should consult the Admissions Office or the University's Office of Equal Opportunity.

Advanced Placement and CLEP

Advanced Placement credit for college level work done in high school is available on the basis of the Advanced Placement Examination of the College Entrance Examination Board and supplementary information. Especially well-qualified applicants for advanced standing may also be exempted from some basic and divisional courses with credit on the authorization of the department concerned. Credit by advanced standing is treated in the same manner as credit transferred from another college.

Under certain conditions especially well prepared applicants may be granted

limited college credit through the subject tests of the College Level Examination Program (CLEP) of the Educational Testing service. Such credit may be assigned with the approval of the department concerned or the Dean of the School of Business and Accountancy.

Admission of Transfer Students

The number of transfer students who can be admitted each year depends upon the availability of space in the freshman (second semester), sophomore, and junior classes. An applicant for admission who has attended another college must be a graduate of a standard junior college or furnish a certificate of honorable dismissal stating eligibility in all respects to enter the college last attended, and must have an overall average of at least C on all college work attempted. A student who is admitted from another college before fully meeting the prescribed admissions requirements for entering freshmen must remove the entrance conditions during the first year at Wake Forest.

The writing of transfer students is checked during the orientation period each semester, and students whose writing is deficient are given a *composition condition*. For removal of a composition condition the student is required to take English 11 during the first semester for which he or she registers following the assignment of the *cc*. Removal of the deficiency is prerequisite to graduation.

Courses satisfactorily completed in other accredited colleges are accepted subject to faculty approval. In general, no credit is allowed for courses not found in the Wake Forest curriculum. The minimum residence requirement for a baccalaureate degree is two academic years, the senior and one other.

Expenses

Statements concerning expenses are not to be regarded as forming an irrevocable contract between the student and the University. The costs of instruction and other services outlined herein are those in effect on the date of publication of this bulletin, and the University reserves the right to change without notice the cost of instruction and other services at any time.

An admission deposit of \$200, which is applied toward tuition and fees for the semester for which the student has been accepted, is required to complete admission. Charges are due in full on August 1 for the fall semester and December 15 for the spring semester. Faculty regulations require that student accounts be settled in full before the student is entitled to receive a grade report, transcript, or diploma, or to register for the following semester or term.

Tuition

	Per Semester	Per Year
Full-Time (twelve or more credits)	\$2,350	\$4,700
Part-Time	\$145 per credit	

Students enrolled in the College or in the School of Business and Accountancy for full-time residence credit are entitled to full privileges regarding libraries, laborato-

ries, athletic contests, concerts, publications, the College Union, the University Theatre, and the Health Service. Part-time students are entitled to the use of the libraries and laboratories but not to the other privileges mentioned above. They must secure a part-time student ID card, admissions to games and concerts, and publications by paying an activity fee of \$75 per semester.

Room Charges

	Per Semester	Per Year
Double occupancy	\$355-\$360	\$710-\$720

Most rooms available for first year students are \$355 per semester for men and \$360 for women. Other room rentals range from \$310 to \$460.

Food Services

A cafeteria, soda shop, and table service dining room are located in Reynolda Hall. Board plans are available for \$800, \$950, \$1,100, and \$1,200 per year. The format of these plans is a credit card system in which the student is charged only for the amount of food purchased at the time it is purchased. The plan may be used at any University Food Services facility, and it allows a great deal of flexibility for eating off campus.

Freshmen living in dormitories are required to participate in one of the board plans.

Other Charges

Admission application fee of \$20 is required with each application for admission to cover the cost of processing and is non-refundable.

Admission deposit of \$200 is required of each student entering for the first time or returning after a period of non-attendance and must be sent to the Director of Admissions within three weeks after acceptance for admission or readmission. The deposit is credited to the student's charges for the semester for which he or she has been accepted for admission. It is refunded if the Director of Admissions is notified in writing prior to May 1 for the fall semester and November 1 for the spring semester of cancellation of plans to enter the College.

Applied music fees are required in addition to tuition for students enrolling for individual class study in applied music in the Department of Music and are payable in the Office of the Treasurer. The fee for one credit per semester (one-half hour per week) is \$90 and for two credits per semester (one hour per week) is \$150. Practice fees are \$15 or \$18 for organ practice, \$7 or \$10 for piano practice, and \$5 or \$7 for other instrument practice for one or two hours a day.

*Hospital bed and board charges are made when the student is confined to the Student Health Service, at a rate of \$40.50 per day. An additional charge is made for special services and expensive drugs. Students **must have** hospital insurance. A group plan is available through the university for those not covered by a family plan. A \$2.00 charge is added to overdue bills.*

Key deposit of \$5 is required for each key issued to a residence hall room and is refunded when the key is returned.

Late registration fee of \$10 is charged to students registering after the dates set by the faculty.

Library fines are charged for lost books and for violation of other library regulations and are payable in the library.

A tuition deposit of \$200 is required, at a date set by the Office of the Treasurer, of students enrolled in the spring semester who expect to return for the fall semester. It is credited to the student's University charges and is refunded if the Treasurer is notified in writing prior to June 1 that the student will not return.

Room change fee of \$5 is charged for authorized room changes made after February 5 in the spring semester. The fine is \$20 for any unauthorized change.

Special examination fee of \$2.50 is required for each examination taken to remove a course condition.

Student apartment rental is payable at \$130 per month.

Motor vehicle registration and traffic fines are \$45 and \$5 to \$10, respectively. All students operating a vehicle on campus (including student apartments and the Graylyn Estate) must register vehicles they are operating day or night, whether or not owned by the operator. All vehicle registrations must be completed within twenty-four hours from the first time the vehicle is brought to campus. Fines are assessed against students violating parking regulations, copies of which are obtainable from the University Public Safety Office. Proof of ownership must be presented when applying for vehicle registration.

Transcripts of a student's record are issued at a cost of \$2 each.

Refunds

During the academic year, all students, full- and part-time, receive tuition refunds according to the following schedule. This policy applies to students dropping courses as well as those withdrawing. Withdrawals must be official and students must return their ID cards before claiming refunds. *There is no refund of room rent.*

<i>Number of Weeks Attendance</i>	<i>Percentage of Total Tuition to be Refunded</i>
1	Total Tuition Less \$200
2	75 percent
3	50 percent
4	25 percent

Housing

All unmarried freshmen students are required to live in residence halls, except (1) when permission is granted by the Dean of Men or the Dean of Women for the student to live with parents or a relative in the Winston-Salem area or (2) by special arrangement when space is not available on campus or (3) if the student has lost residence hall space because of a room contract violation. Fifth-year students are ineligible for housing. Married students are not usually allowed to live in residence halls except when permitted by the Dean of Men or the Dean of Women. Residence

halls are supervised by the Director of Housing, the Directors of Residence Life, head residents, and assistants under the direction of the Dean of Men and the Dean of Women.

The following charges per year apply for each student in the residence halls: in Kitchin House, Poteat House, Davis House, Taylor House, Huffman Hall, and Efin Hall, \$570 for triple rooms, \$620 for small double rooms, \$710 for large double rooms, and \$880 for single rooms; in Johnson and Bostwick Residence Halls, \$720 for double rooms and \$860 for single rooms; in Babcock Residence Hall, \$820 for double rooms and \$910 for single rooms; in New Dormitory, \$920 for double room in each of four town house apartments, \$920 per occupant; at Graylyn Estate, \$920 per occupant. For each of the fifty-six married student apartments the charge is \$130 per month.

Academic Calendar

The academic calendar of the College and the School of Business and Accountancy includes a fall semester ending before Christmas, a spring semester beginning in January and ending in May, and two five-week summer sessions. Semesters usually last fifteen weeks.

Orientation and Advising

A three-day orientation period for new students in the College precedes registration for the fall semester. An academic adviser who is either a member of the faculty or an upperclassman in the peer-advising program provides guidance during and between registration periods throughout the student's freshman and sophomore years. Advisers meet with students both individually and in small groups. Students are encouraged to take the initiative in arranging additional meetings at any time they feel a need for advice or other assistance. The adviser suggests and approves courses of instruction until the student declares a major in a field of study at the end of the sophomore year. At that time a new adviser is assigned from the department or departments concerned.

Registration

A two-day registration period for all students in the College and the School of Business and Accountancy opens the fall semester and the spring semester. Registration involves (1) payment of all tuition and fees in full to the Treasurer, (2) obtaining a summary of prior record from the Registrar, (3) consultation with the academic adviser, (4) sectioning of classes by departmental representatives, and (5) verification of registration cards with class schedules by the Registrar.

Classification

Classification of students by class standing and as full-time or part-time is calculated in terms of credits. Most courses in the College and the School of Business and Accountancy have a value of four credits, but others vary from one credit to five. The

normal load for a full-time student is eighteen credits per semester; a slightly heavier load is permitted under certain circumstances. Twelve credits per semester constitute minimum full-time registration. (Recipients of North Carolina Legislative Tuition Grants must be enrolled for at least fourteen credits each semester—by the tenth day of classes. Recipients of veteran benefits, grants from state government, and other governmental aid must meet the guidelines of the appropriate agencies.) A student may not register for fewer than twelve credits without specific permission from the Committee on Academic Affairs to register as a part-time student.

A full-time student in the fall semester of any year may not be a part-time student in the spring semester immediately following. Any student who petitions for part-time status within the semester in which he or she wishes to gain such status is not eligible for a tuition refund.

The requirements for classification after the freshman year are as follows: sophomore—the removal of all entrance conditions and the completion of not fewer than twenty-nine credits toward a degree, with a minimum of fifty-eight grade points; junior—the completion of not fewer than sixty credits toward a degree, with a minimum of 120 grade points; senior—not fewer than 108 credits toward a degree, with a minimum of 216 grade points.

Class Attendance

Attendance regulations place the responsibility for class attendance on the student, who is expected to attend classes regularly and punctually. One of the most vital aspects of the residential college experience is attendance in the classrooms; its value cannot be fully measured by testing procedures alone. Students are considered sufficiently mature to appreciate the necessity of regular attendance, to accept this personal responsibility, to demonstrate the self-discipline essential for such performance, and to recognize and accept the consequences of failure to attend. Students who are deemed to be causing their work or that of the class to suffer because of absence or lateness may be referred by the instructor to the Dean of the College or to the Dean of the School of Business and Accountancy, as appropriate, for suitable action. Any student who does not attend classes regularly or who demonstrates other evidence of academic irresponsibility is subject to such disciplinary action as the Committee on Academic Affairs may prescribe, including immediate suspension from the College or the School of Business and Accountancy.

The Office of the Dean of the College maintains a list of students who have been absent from class because of illness certified by the Student Health Service, because of other extenuating circumstances, or as authorized representatives of the college whose names have been submitted by appropriate officials forty-eight hours in advance of the hour when the absences are to begin. Such absences are considered excused and a record of them is available to the student's instructor upon request. The instructor determines whether work missed can be made up.

Auditing Courses

When space is available after the registration of regularly enrolled students, others

may request permission of the instructor to enter the course as auditors. No additional charge is made to full-time students in the College or in the School of Business and Accountancy; for others the fee is \$60 per course, and permission of the appropriate dean, as well as that of the instructor, is required. An auditor is subject to attendance regulations and to other conditions imposed by the instructor. Although an auditor receives no credit, a notation of *audit* is made on the final grade report and entered on the record of regularly enrolled students who have met the instructor's requirements. An audit course may not be changed to a credit course, and a credit course may not be changed to an audit course.

Dropping a Course

The last day in each term for dropping a class without a grade of F is listed in the calendar in the front of this catalog. A student who wishes to drop any course *before* this date must consult the Registrar and his or her faculty adviser. *After* this date, the student who wishes to drop a course must consult his or her faculty adviser, the course instructor, and the Dean of the College or the Dean of the School of Business and Accountancy as appropriate. If the Dean approves the request, he authorizes the student to discontinue the course. Except in the case of an emergency, the grade in the course will be recorded as F.

If, at any time, a student shall drop any course without prior, written approval of the appropriate dean, the student will be subject to academic probation for the following semester or to such other penalties as the Committee on Academic Affairs of the faculty may impose.

Withdrawal from the College

A student who finds it necessary to withdraw from the College or the School of Business and Accountancy must do so through the office of the appropriate dean. With the approval of the Dean of the College or the Dean of the School of Business and Accountancy, no grades are recorded for the student for that semester, but the student's standing in courses at the time of withdrawal is taken into consideration when readmission is sought. If withdrawal is for academic reasons, failing grade may be assigned in all courses in which the student is doing unsatisfactory work. A student who leaves the College or the School of Business and Accountancy without officially withdrawing is assigned failing grades in all current courses, and the unofficial withdrawal is recorded.

Examinations

Final examinations are given at regularly scheduled times. All examinations are conducted in accordance with the honor system adopted by the student body and approved by the faculty. Under it the student is expected to refrain from unfairness in any form and to report to the Honor Council any student he or she knows to be cheating. Examinations are turned in with a signed statement that no aid has been given or received.

Grading

For most courses carrying undergraduate credit there are five final and two conditional grades: *A (exceptionally high achievement)*, *B (superior)*, *C (satisfactory)*, *D (passing but unsatisfactory)*, *E (conditional failure)*, *F (failure)*, and *I (incomplete)*.

Grade of E. The grade of E entitles the student to reexamination at any regular examination period within a year, or during the first week of the fall semester. A permit for reexamination must be obtained in advance from the Registrar, and no grade higher than D may be assigned as a result of reexamination. A student who does not remove a conditional failure by reexamination must repeat the course to obtain credit for it.

Grade of I. The grade of I may be assigned only when because of illness or some other emergency a student does not complete the work of the course. If the work recorded as I is not completed within thirty days after the student enters for his or her next semester, the grade automatically becomes F. The instructor must report the final grade to the Registrar within forty-five days after the beginning of that semester.

Grade Points. Grades are assigned grade points for the computation of academic averages, class standing, and eligibility for continuation, as follows: for each credit of A, four points; for each credit of B, three points; for each credit of C, two points; for each credit of D, one point; for each credit of E or F, no points.

Pass/Fail. To encourage students to venture into fields outside their major areas of competence and concentration, the undergraduate schools make available the option, under certain conditions, of registering in courses on a Pass/Fail basis rather than for a letter grade. Courses taken under the Pass/Fail option yield full credit when satisfactorily completed, but whether passed or not they are not computed in the grade point average.

A student may count toward the degree no more than twenty-four credits taken on a Pass/Fail basis. Freshmen and sophomores are not eligible to elect the Pass/Fail mode, but may enroll for courses offered on a Pass/Fail basis only. A student may during the junior and senior years only elect up to a total of sixteen credits on a Pass/Fail basis, but no more than five credits in a given semester. Courses used to fulfill basic, divisional, or major requirements may not be taken on a Pass/Fail basis unless they are offered only on that basis. Courses in the major(s) not used for satisfying major requirements may be taken on a Pass/Fail basis only if the department of the major does not specify otherwise.



Groves Stadium

Grade Reports and Transcripts

A mid-term report and a final report of grades are issued to students by the Registrar in the fall and spring semesters. A final report of grades is issued for each summer term.

Copies of a student's cumulative record are issued by the Registrar, but only on the written authorization of the student and payment of \$2 per transcript.

Dean's List

The Dean's List is issued at the end of the fall and spring semesters. It includes all full-time students in the College and the School of Business and Accountancy who have a grade point average of 3.0 or better for the semester and who have earned no grade below C during the semester.

Graduation Distinctions

Graduation distinctions are determined by the grade point system. A degree candidate with a total average of not less than 3.80 for all courses attempted is graduated with the distinction *summa cum laude*. A candidate with a total average of not less than 3.50 for all courses attempted is graduated with the distinction *magna cum laude*. A candidate with a total average of not less than 3.00 for all courses attempted is graduated with the distinction *cum laude*. Particular conditions apply to students transferring from other colleges or participating in combined degree programs. Details are available in the Office of the Registrar.

Repetition of Courses

A student may not repeat for credit a course for which he or she has already received a grade of C or higher. (When a student repeats a course previously passed, he may not earn additional credit for that course. Both grades, however, will be considered in calculating the student's grade point average.)

Probation

A student is responsible at all times for knowing his or her academic standing. Any student who at the end of the fall semester does not have the grade average normally required for continuation at the end of the following spring semester is automatically on academic probation.

Any student who is placed on probation because of Honor Code or conduct code violations is placed on such special academic probation as the Committee on Academic Affairs imposes. The Committee on Academic Affairs may at any time place on probation a student whose academic performance or social behavior is inconsistent with what the committee deems to be in the best interest of the student or the University.

Any student convicted of violating the Honor Code is ineligible to represent the University in any way until the period of suspension or probation is completed and the student is returned to good standing. Students who are on probation for any

reason may not be initiated into any fraternity until the end of their probationary period.

Requirements for Continuation

Each student is expected to be aware at all times of his academic status and to be responsible for knowing whether he has met the University's minimum academic requirements for continuation as outlined below.

On the basis of their cumulative records at the end of the spring semester, those students are academically ineligible to enroll for the following fall (1) who have attempted fewer than fifty-four credits in all colleges and universities attended and have a grade point average of less than 1.35 on work attempted for a grade in the College or the School of Business and Accountancy; (2) who have attempted as many as fifty-four but fewer than ninety-eight credits in all colleges and universities attended and have a grade point average of less than 1.65 on work attempted for a grade in the College or the School of Business and Accountancy; (3) who have attempted as many as ninety-eight but fewer than 135 credits in all colleges and universities attended and have a grade point average of less than 1.85 on work attempted for a grade in the College or the School of Business and Accountancy; (4) who have attempted 135 credits or more in all colleges and universities attended and have a grade point average of less than 1.90 on work attempted for a grade in the



College or the School of Business and Accountancy. Non-credit courses, courses taken Pass/Fail, and CLEP and Advanced Placement credit are not computed in the grade point average. (For the purpose of determining eligibility for graduation, the grade point average is computed on all work attempted in Wake Forest College and the School of Business and Accountancy, and is also computed on all work attempted in all accredited colleges and universities.)

Ordinarily a student who is ineligible to continue may attend the first summer term and if successful in raising the grade point average to the required minimum may enroll for the following fall semester. The student may attend the second summer term if unsuccessful in the first, and if successful then may enroll for the following spring semester. If unsuccessful in meeting the minimum requirements by the end of the second summer term, the student may apply for readmission no earlier than the following summer session.

Under exceptionally extenuating circumstances beyond the control of the student and after consultation with the appropriate dean, the student may petition the Committee on Academic Affairs for an exception to the foregoing eligibility requirement. The Committee on Academic Affairs may suspend at the end of an semester or term any student whose record for that term has been unsatisfactory particularly with regard to the number of courses passed and failed, or any student who has not attended class regularly or has otherwise ignored the rules and regulations of the College or the School of Business and Accountancy.

A student who has or develops a health problem which in the judgment of the Director of the Student Health Service creates a danger to the safety and well-being of the student or others may be required to withdraw until the problem is resolved.

Requirements for Readmission

A student seeking readmission to the College must meet the minimum academic requirements for continuation. However, a student who has not met the requirements (1) may apply for admission to the summer session only, (2) may apply for readmission after an absence from the College of at least a year and a half, (3) may apply for readmission after less than a year and a half if enrolled in another college or university, or (4) may apply for readmission if the failure to meet minimum requirements was due to exceptionally extenuating circumstances beyond the control of the student.

Senior Conditions

A candidate for graduation in the final semester who receives a grade of E in the previous semester may apply to the Registrar for reexamination thirty days after the opening of the final semester but not less than thirty days before its close. All conditions must be removed not less than thirty days before the end of the last semester or term of the student's graduation year. The name of a candidate who has a condition after that date is dropped from the list of candidates. A candidate who receives a grade of E in the final semester or term of the graduation year is not allowed reexamination before the next examination period.

Scholarships and Loans

Any student admitted to Wake Forest College who demonstrates financial need will receive assistance commensurate with that need.

By regulation of the Board of Trustees, all financial aid must be approved by the Committee on Scholarships and Student Aid. Applications should be requested from the committee at 7305 Reynolda Station, Winston-Salem, North Carolina 27109. Scholarships supported by funds of the undergraduate schools are not granted to students enrolled in other schools of the University. To receive consideration for financial aid, the applicant must either be enrolled as an undergraduate or have been accepted for admission. The financial aid program comprises institutional, state, and federal scholarship, loan, and work funds. Full-time students are eligible to apply for any of these funds. Half-time students are eligible to apply for federal funds. Half- and part-time students are eligible to apply for limited institutional funds.

Need is a factor in the awarding of most financial aid, and each applicant must file a financial statement with the application for financial aid. After reviewing the standard financial analysis, the Committee on Scholarships determines aid awards, and aid is credited, by semester, to the student's account in the Office of the Treasurer. The Committee on Scholarships reserves the right to revoke financial aid for unsatisfactory academic achievement or for violation of University regulations or federal, state, or local laws. To be eligible for renewal of aid, a student must remain enrolled on a normal full-time basis and be in good standing, making satisfactory progress toward a degree. The committee does not award institutional scholarships to students earning less than a 2.0 grade average on all work attempted at Wake Forest.

Scholarships

The Reynolds Scholarships, made possible through a grant from the Z. Smith Reynolds Foundation, are full merit scholarships, covering the cost of tuition, room, and board, and including an allowance for books and other personal needs. The Reynolds Scholarships are awarded without regard to financial need and will be renewed annually through the recipient's fourth year of college, subject to satisfactory performance. The University plans to award four Reynolds Scholarships each year beginning with 1982-83 to extraordinarily capable men and women entering the College as first-year students.

The Guy T. Carswell Scholarships, made possible by and established in honor of the late Guy T. Carswell and his wife Clara Carswell of Charlotte, North Carolina, carry an annual value ranging from a minimum stipend of \$1,500 to a maximum stipend of \$7,000, with awards for more than \$1,500 determined on the basis of need. A Carswell Scholar must be a student applying to the College who possesses outstanding qualities of intellect and leadership. Up to forty scholars are selected annually.

The George Foster Hankins Scholarships for Freshmen, made possible by the late Colonel George Foster Hankins of Lexington, North Carolina for residents of North

Carolina or children of alumni residing in other states, with preference given to residents of Davidson County, North Carolina, have a value up to \$7,000.

The George Foster Hankins Scholarships for Upperclassmen for students who have been enrolled for at least one semester, with preference given to applicants from Davidson County, North Carolina, vary in value according to need.

The Alcoa Foundation Scholarship, donated by the Alcoa Foundation, is available to a freshman from the Piedmont area who is majoring in chemistry. The scholarship has a value of \$2,000 and is awarded on the basis of need.

The Alpha Phi Omega Scholarship, established by the Kappa Theta Chapter of Alpha Phi Omega, is made available in alternate years to a freshman who presents evidence of need and an excellent high school record. It has a minimum value of \$200.

The Camillo Artom Fund for Italian Studies was established in 1976 in honor of Camillo Artom, professor of biochemistry from 1939 to 1969. Scholarship aid is made available, usually to one or two students each semester, to assist with their expenses. Well qualified students who can demonstrate need are eligible to apply (Interested persons should apply in the Office of the Provost.)

Pell Grants are federal funds awarded to undergraduate students with exceptional financial need who require these grants in order to attend college, for a value of from \$200 to \$1,800 per year. The amount of assistance a student may receive depends upon need, taking into account financial resources and the cost of attending the college chosen.

The George M. and Daisy Olive Beavers Scholarship Fund, donated by Lydia Beavers in memory of her parents, is for one scholarship awarded on the basis of leadership, good citizenship, and excellence of character.

The Eliza Pratt Brown Scholarship, donated by the late Junius Calvin Brown of Madison, North Carolina in honor of his wife Eliza Pratt Brown, is used to assist needy, worthy, and deserving students from North Carolina, with preference given to students from the town of Madison and Rockingham County, for a maximum of \$2,000.

The J. G. Carroll Memorial Athletic Scholarship, donated in memory of J. G. Carroll, former associate professor of mathematics, is made to a deserving athlete who is not on a regular athletic scholarship, for a value of approximately \$100.

The James Lee Carver Scholarship, donated by Jean Freeman Carver with her children James Lee Carver II and Elizabeth Jeanine Carver in memory of her husband James Lee Carver, is for deserving and promising students who demonstrate a need for financial assistance, with preference given to students from the Oxford Orphanage in Oxford, North Carolina, for a value of approximately \$300.

The College Scholarships, in the amount of \$100 to \$4,700 each, are available to freshmen and upperclassmen presenting satisfactory academic records and evidence of need.

The Jennifer Rose Cooke and Laura Elizabeth Scales Memorial Scholarship established by Charles H. Cooke of Oklahoma City, Oklahoma in memory of the daughters of Charles H. and Edith Cooke and James Ralph and Betty Scales, carries a minimum stipend of \$3,600 and is awarded on the basis of academic ability and commitment to

serve in the field of international relations. Application is made to a special committee.

The O. B. Crowell Memorial Scholarship Fund, donated by Louise T. Crowell of Hendersonville, North Carolina in memory of her husband O. B. Crowell, is awarded on the basis of character, need, and promise, for a value of approximately \$600.

The Gary Franklin Culler Scholarship Fund, donated in the memory of the late Gary Franklin Culler, is awarded on the basis of academic ability and outstanding leadership potential, with preference given to students from the High Point, North Carolina area, for a value of approximately \$700.

The J. B. Dickinson Jr. Scholarship, donated by Bonders Inc. of Dunn, North Carolina in memory of John Brewer Dickinson Jr., is awarded to a rising senior accounting major on the basis of academic excellence and professional promise.

The Lecausey P. and Lula H. Freeman Scholarship, donated by Mr. and Mrs. G. H. Singleton of Raleigh, North Carolina in memory of the parents of Mrs. Singleton, is available to a freshman, sophomore, or junior whose home is within the West Chowan Baptist Association of North Carolina, with preference given to Bertie County students, on the basis of need and ability. Residents of the Roanoke Association may be considered for the scholarship, which is renewable on the basis of need and ability except for the senior year, for a value of approximately \$200.

The Charles A. Frueauff Scholarships are provided annually by the Charles A. Frueauff Foundation for middle-income students who live outside North Carolina. Amounts vary according to need, up to \$1,500.

The James W. Gill Scholarship, donated by Ruth R. Gill in memory of her husband James W. Gill, provides a scholarship for a deserving student, with preference given to students from Montgomery and Prince George Counties, Maryland, for a value of approximately \$600.

The Eugene Basil Glover Memorial Scholarship is awarded to an incoming or enrolled student based on ability and need, with a slight preference given to students from Halifax County, North Carolina.

The Wallace Barger Goebel Scholarship, made possible through a donation from Miriam M. Goebel, is based upon ability and financial need, with first preference given to a student with an interest in literature, second preference to a student with an interest in history, and third preference to a student enrolled in the pre-medical program, for a value of approximately \$400.

The Fuller Hamrick Scholarship, created under the will of the late Everett C. Snyder of Wake Forest, North Carolina in memory of Fuller Hamrick, is used to educate students from the Mills Home in Thomasville, North Carolina, for a value of approximately \$550.

The Margaret S. Hasty Memorial Scholarship Fund, established by Judge Fred H. Hasty in memory and honor of his beloved wife, is for one or more female undergraduate students with good academic ability and financial need. The scholarship is renewable if student places in the upper third of her class.

The Frank P. Hobgood Scholarship, donated by Kate H. Hobgood of Reidsville, North Carolina in memory of her husband, is available to those who qualify on the basis of character, purpose, intelligence, and need, with preference given to those who plan

to enter the ministry, do religious work, become teachers, or become lawyers, the preference being in the order named, for residents of the Reidsville, North Carolina area recommended by the deacons of the First Baptist Church of Reidsville, and for a value of \$500.

The Forrest H. Hollifield Scholarship, donated by Mr. and Mrs. H. H. Hollifield in memory of their son Forrest H. Hollifield, is awarded to upperclassmen with evidence of character and need, with preference given to natives of Rowan and Rutherford Counties, North Carolina and to members of the Delta Nu Chapter of Sigma Chi Fraternity.

The George W. Kane Scholarship, established by the George W. Kane Company in honor of George W. Kane, former member of the Wake Forest College Board of Visitors, is a full tuition scholarship and is awarded on the basis of academic merit and need.

The J. Lee Keiger Sr. Scholarship is an academic scholarship awarded annually to a North Carolina student, with preference given to students living in the Mid-Carolina Telephone Company service region, for a value of \$750.

The Senah C. and C.A. Kent Scholarships are awarded to freshmen and upperclassmen on the basis of leadership, academic merit, and financial need without regard to race, religion, sex, or geographical origin.

The Kirkpatrick-Howell Memorial Scholarship Fund, donated by the Delta Nu Chapter of Sigma Chi Fraternity, makes available one or two scholarships, with preference given to members of the Sigma Chi Fraternity, upon recommendation of the Kirkpatrick-Howell Memorial Scholarship Board, for a value of approximately \$800.

The Charles L. Little Scholarship Fund, established by Charles L. Little, is given to upperclass students. Preference is given to pre-medical students from Anson County and immediately adjacent counties in North Carolina who provide satisfactory evidence of a willingness to give serious consideration to practicing medicine in Wadesboro, or Anson County, North Carolina.

The Wilma L. McCurdy Memorial Fund Scholarship is awarded on the basis of character, academic standing, and need, in the amount of \$750 per academic year. Application must be made annually.

The Thane Edward McDonald and Marie Dayton McDonald Memorial Scholarship Fund made possible by the late Thane Edward McDonald, professor of music, is available to a deserving and qualified music student for a value of approximately \$125.

The Robert Lee Middleton Scholarship, donated by Sarah Edwards Middleton of Nashville, Tennessee in memory of her husband, is awarded on the basis of character, purpose, intelligence, and need, with preference given to the student planning to enter the field of literature, accounting, teaching, or the gospel ministry or other full-time religious work.

The Mildred Bronson Miller Scholarship Fund, donated by Mildred B. Miller of Atlanta, Georgia, is awarded to students on the basis of leadership, dedication, competitiveness, and citizenship.

The Norfleet Scholarships, donated by Mr. and Mrs. Eustace Norfleet of Wilmington, North Carolina in memory of his parents John A. and Mary Pope Norfleet, are available to deserving and promising students needing financial assistance for a value of \$200.

The North Carolina Scholarships are made available by the North Carolina General Assembly and are awarded on the basis of financial need to full-time students who are bona fide residents of North Carolina.

North Carolina Student Incentive Grants are available to undergraduate residents of North Carolina with exceptional financial need who require these grants in order to attend college, for a value of from \$200 to \$1,500 per year. The amount of assistance a student may receive depends upon need, taking into account financial resources and the cost of attending the college chosen.

The Benjamin Wingate Parham Scholarship, donated by Kate J. Parham of Oxford, North Carolina in memory of her husband, is awarded on the basis of ability and need and may be renewed for succeeding years.

The Thomas F. Pettus Scholarships, administered by the North Carolina Baptist Foundation under the terms of the will of the late Thomas F. Pettus of Wilson County, North Carolina, make two or more scholarships available each year in memory of Mr. Pettus and are awarded on the basis of merit and need, with preference given to North Carolina Baptist students.

The William Louis Poteat Scholarships, valued at \$1,500 per year, are available to eleven freshmen, one from each Congressional District of North Carolina. To be eligible a student must be an active member of a Southern Baptist church in North Carolina, must be likely to make a significant contribution to church and society, and must be appreciative of the quality of education available at Wake Forest University.

The A. M. Pullen and Company Scholarship, granted by the A. M. Pullen Company to an outstanding upper division accounting major designated by the accounting faculty on the basis of merit, financial need, and interest in public accounting, has a value of \$750.00.

The Kenneth Tyson Raynor Scholarship, donated by friends of the late Kenneth Tyson Raynor, professor of mathematics, is awarded annually by the mathematics faculty. The award is made on the basis of academic ability to an individual majoring in mathematics who has achieved junior standing.

The Oliver D. and Caroline E. Revell Memorial Scholarship Fund, created under the will of the late Oliver D. Revell of Buncombe County, North Carolina, is for a person preparing for the ministry or full-time religious work, for a value of \$100.

The Kate B. Reynolds Memorial Scholarships, donated in memory of the late Kate B. Reynolds, are for residents of Forsyth County, North Carolina who without financial aid would be unable to obtain education beyond high school. At least four scholarships are awarded, with a value up to \$2,400.

The Reserve Officers Training Corps (ROTC) Scholarships, made available by the U. S. Army, are awarded for academic and personal achievement. The four, three, two, and one year scholarships, each with an annual value of more than \$5,000, cover tuition, fees, books, and classroom materials. A monthly stipend of \$100 is also given during the academic year. Recipients must participate in the ROTC program and maintain satisfactory academic progress. Four year scholarships must be applied for in the junior or senior years of high school. Other scholarships must be applied for through the Professor of Military Science, Wake Forest University. Some preference is given to students of biology, chemistry, mathematics, and physics. Two year

scholarships for rising juniors are also available on the basis of academic accomplishment and outstanding performance at the six week ROTC Basic Camp.

The Robert Forest Smith III Scholarship Fund, donated by the Rev. Mr. and Mr. Robert Forest Smith Jr. and other citizens of Hickory, North Carolina in memory of Robert Forest Smith III, is awarded to an entering freshman who qualifies on the basis of need and on distinction in high school government, with preference given to those who plan to enter government service, and with strong preference given to students exemplifying positive Christian principles, for a value of \$1,000.

The Sigmund Steruberger Scholarships, donated by the Sigmund Sternberger Foundation, are for needy North Carolinians, with preference given to undergraduate students from Greensboro and Guilford County, for a value of \$2,000.

The J. W. Straughan Scholarship, donated by Mattie, Mable, and Alice Straughan in memory of their brother Dr. J. W. Straughan of Warsaw, North Carolina, with preference given to students from Duplin County, North Carolina who are interested in pursuing a medical career, especially in the field of family practice, is for those who need financial assistance to continue their education.

The Saddy Stephens and Benjamin Louis Sykes Scholarship, donated by Dr. Charles L. Sykes and Dr. Ralph J. Sykes in memory of their mother and father, is awarded on the basis of Christian character, academic proficiency, and financial need, with preference given to freshmen from North Carolina, renewable for a value of approximately \$400.

The Supplemental Educational Opportunity Grants are available to a limited number of undergraduate students with exceptional financial need who require these grants to attend college and who show academic or creative promise, for a value from \$200 to \$2,000 a year. The amount of financial assistance a student may receive depends upon need, taking into account financial resources and the cost of attending the college chosen.

The Tyner-Pitman Scholarship Fund, donated by Cora Tyner Pitman, makes available at least one scholarship for needy North Carolina students.

The Jesse A. Williams Scholarships, created under the will of the late Jesse A. Williams of Union County, North Carolina, with preference given to deserving students of Union County, have a value up to \$1,200.

The James Bennett Willis Scholarship Fund, established by Mr. James B. Willis of Hamlet, North Carolina, gives preference to North Carolina Baptist students interested in the ministry and Christian Education. It is awarded on the basis of need.

The Maria Thornton and Miriam Carlyle Willis Scholarship Fund, established by James B. Willis in memory of his wife and daughter, gives preference to North Carolina Baptist students who are interested in all phases of the Ministry of Music. It is awarded on the basis of need.

The Charles Littell Wilson Scholarship, created under the will of Jennie Mayes Wilson in memory of her husband Charles Littell Wilson, is for a freshman, with a value from \$200 to \$600.

The William Luther Wyatt III Scholarship Trust, donated by Mr. and Mrs. William L. Wyatt Jr. of Raleigh, North Carolina in memory of their son William Luther Wyatt III, with preference given to a male student entering the junior year who has shown

n interest and an ability in the field of biology, is based on need and ability, for a value of approximately \$500.

Exchange Scholarships

The German Exchange Scholarship, established in 1959 with the Free University of Berlin, is available to a student with at least two years of college German or the equivalent who has junior standing by the end of the semester in which application is made, but who need not be a German major. It provides 750 German marks per month for ten months, remission of fees, 200 marks per semester for books, and 250 marks per month for rent. (Interested students should communicate with the chairman of the Department of German.)

The Spanish Exchange Scholarship, established in 1964 with the University of the Andes in Bogotá, Colombia, is available to two students for one semester's study each or one student for two semesters with at least two years of college Spanish or the equivalent. It provides remission of fees, the cost of books, and the cost of board and accommodations. (Interested students should communicate with the chairman of the Department of Romance Languages.)

The French Exchange Scholarship, established in 1971 with the University of Orleans, France, is available to a graduating senior, who receives a graduate teaching assistantship at the University of Orléans for two semesters. (Interested students should communicate with the chairman of the Department of Romance Languages.)

Loans

The James F. and Mary Z. Bryan Foundation Student Loan Plan is for residents of North Carolina enrolled full-time for a value up to \$7,500 for undergraduate study. The amount of each loan is determined by the College Foundation, with an interest rate of one percent during the in-school and grace periods and seven percent during the repayment period.

The Bushnell Baptist Church Loan Fund, established in 1945 with funds supplied by the Bushnell Baptist Church of Fontana Dam, North Carolina, is for needy students.

The Council Fund, established in 1935 by C. T. Council of Durham, North Carolina, is for the aid of senior students.

The James W. Denmark Loan Fund, originated in 1875 by James William Denmark of Dudley, North Carolina, is available to qualified students, with preference given to students from North Carolina, for an amount not exceeding \$1,500 each year and \$6,000 during the entire period of enrollment.

The Olivia Dunn Student Loan Fund, established under the will of Birdie Dunn of Wake County, North Carolina in memory of her mother, is for worthy students.

The Duplin County Loan Fund, donated in 1942 by anonymous friends of the college, is limited to students from Duplin County, North Carolina.

The Elliott B. Earnshaw Loan Fund, established by the Board of Trustees, is a memorial to the former Bursar.

The Friendly Student Loan Fund, established in 1948 by Nell E. Stinson of Raleigh, North Carolina in memory of her sister Mary Belle Stinson Michael, is for the benefit of worthy students who need financial aid.

The George Foster Hankins Loan Fund, established under the will of the late Colonel George Foster Hankins of Lexington, North Carolina, gives preference to applicants from Davidson County, North Carolina.

The Guaranteed Student Loan Program makes available loans up to \$2,500 for undergraduate students. Aggregate undergraduate sums may not exceed \$12,500 but may be extended to \$25,000 for those who also borrow for graduate or professional study. The maximum loan per year for graduate students is \$5,000. Loans are insured by the federal government or guaranteed by a state or private non-profit guarantee agency. The federal government pays the nine percent interest during in-school and grace periods. Application and information may be obtained from state guarantee agencies or from the appropriate regional office of the United States Office of Education.

The Harris Memorial Loan Fund, established by the late J. P. Harris of Bethel, North Carolina in memory of his first wife Lucy Shearon Harris and his second wife Lucy Jones Harris, is for students who have demonstrated ability to apply educational advantages to the rendition of enriched and greater Christian service in life and who require financial assistance in order to prevent disruption of their education.

The Edna Tyner Langston Fund, established in 1942 by Dr. Henry J. Langston of Danville, Virginia in memory of his wife, is available to a student agreed upon by the donor and the College.

The National Direct Student Loan Program makes available loans up to \$2,500 per year for students in need of financial assistance with an interest rate of five percent. These are examples of typical repayment schedules:

Aggregate Loan	Quarterly Payments	Amount of Payment	Total Interest Paid	Total Payment
\$2,500	35	\$ 90.00	\$ 590.22	\$3,090.22
5,000	40	159.61	1,384.27	6,384.27
7,500	40	239.41	2,076.44	9,576.44

Aggregate undergraduate sums may not exceed \$3,000 for the first two years or \$6,000 for four years, but may be extended to \$12,000 for those who also borrow for graduate or professional study, with an interest rate of five percent.

The North Carolina Insured Student Loan Program makes available loans up to \$2,500 per year for legal residents enrolled full-time. Aggregate undergraduate sums may not exceed \$12,500 but may be extended to \$25,000 for those who also borrow for graduate or professional study. The maximum loan each year may not exceed \$2,500 for undergraduates or \$5,000 for graduates or professional students. Loans are insured by the North Carolina State Education Assistance Authority and are processed by the College Foundation. Under certain conditions the United States Office of Education pays the nine percent interest during the in-school and grace periods.

The Watts Norton Loan Fund, established in 1949 by L. Watts Norton of Durham, North Carolina, is for worthy students enrolled in the Department of Religion who need financial assistance.

The Powers Fund, established in 1944 by Dr. Frank P. Powers of Raleigh, North

Carolina in memory of his parents Frank P. and Effie Reade Powers, is for the benefit of needy students, with preference given to orphans.

The Grover and Addy Raby Loan Fund, established in 1945 by Dr. J. G. Raby of Tarboro, North Carolina in memory of his parents, gives preference to applicants from the First Baptist Church of Tarboro.

The James F. Slate Loan Fund, established in 1908 by J. F. Slate of Stokes County, North Carolina, is available for ministerial students who have been licensed to preach.

Concessions

North Carolina Legislative Tuition Grants. The North Carolina General Assembly provides yearly grants to all legal residents of North Carolina. To be eligible a student must be enrolled for at least fourteen credits each semester (by the tenth day of classes) and complete a Residency Form 100. The student must not have received a bachelor's degree previously. To receive the grant, a student must also complete an NCLTG application and return it to the Financial Aid Office.

Ministerial students receive a \$600 concession per year if they (1) have a written recommendation or license to preach from their own church body and (2) agree to repay the total amount, plus four percent interest, in the event that they do not serve five years in the pastoral ministry within twelve years of attendance in the College.

Children and spouses of pastors of North Carolina Baptist churches receive a \$600 concession per year if they are the children or spouses of (1) ministers, (2) missionaries of the Southern Baptist Foreign Mission Board, (3) officials of the Baptist State Convention of North Carolina, or (4) professors in North Carolina Baptist colleges or universities. Pastors themselves are also eligible.

Children of other ministers who are not eligible for the above concession receive a \$150 concession per year if their parent makes a living chiefly by the ministry and they have a demonstrated need.

Rehabilitation students receive a concession up to \$300 per year if they (1) have a letter of approval from the North Carolina Division of Vocational Rehabilitation and (2) file for the concession.

Other Financial Aid

The College Work/Study Program On Campus makes available on-campus employment to students who show evidence of financial need. Students work during the academic year for campus minimum wage or above, at an average of ten to fifteen hours per week, in the Z. Smith Reynolds Library, Reynolda Hall, College Union, Reynolda Gardens, and other places on campus.

Church Choir Work Grants, given by the College and Wake Forest Baptist Church to encourage outstanding music students, are awarded on the basis of talent, reliability, and interest in the Church on the recommendation of the music committee of the Church and the Department of Music, for the value of \$300. (Interested students should communicate with the chairman of the Department of Music.)

The Ministerial Aid Fund, established in 1897 by the estate of J. A. Melke, is available

to pre-ministerial students on a loan or grant program on the basis of merit and need and particularly in the case of grants, academic achievement.

Student/Student Spouse Employment is possible for part-time, on-campus and off-campus work, for a recommended maximum of twenty hours per week for full-time students. Summer employment may also be available. (Interested students should communicate with the Office of Placement and Career Development.)

Veteran Benefits are administered by the Office of the Veterans Administration in the Federal Building at 251 North Main Street in Winston-Salem. Records of progress are kept by this institution on veteran and non-veteran students alike. Progress records are furnished the students, veterans and non-veterans alike, at the end of each scheduled school term.



John Williard, vice president and treasurer

Special Programs

For students of special ability or interest and for students who can take advantage of off-campus study opportunities, the College offers a variety of programs. These are in addition to combined courses of study in departments in the College and the pre-professional curricula described in this bulletin.

Honors Study

For highly qualified students, a series of interdisciplinary honors courses is described under *Courses of Instruction*. Under the supervision of the Coordinator of the Honors Program, students participate in three or more honors seminars during the freshman, sophomore, and junior years. Those who complete four seminars with a superior record and who are not candidates for departmental honors may complete a final directed study course. With a superior record in that course and a grade point average of 3.0 in all work, a student may be graduated with "Honors in the Arts and Sciences."

For students especially talented in individual areas of study, most departments in the College offer special studies leading to graduation with honors in a particular discipline. The minimum requirement is a grade point average of 3.0 in all work and 3.3 (or higher in some areas) in the major. Other course, seminar, and research requirements vary according to the department concerned.

Open Curriculum

For students with high motivation and strong academic preparation, the Open Curriculum provides the opportunity to follow a course of study planned within the framework of a liberal arts education but not necessarily fulfilling all basic and divisional requirements for the degree. Under the Committee on Open Curriculum a limited number of students is selected before or during the freshman year by previous record of achievement, high aspirations, ability in one or more areas of study, strength of self-expression, and other special talents. The course of study for the degree is designed by the student and his or her adviser.

Residential Language Centers

For students prepared to speak French, German, or Spanish on a regular basis with other students studying the same language, the Graylyn Estate near campus is the site of three residential centers, each coordinated by a member of the Department of Romance Languages or the Department of German. Such students attend regular classes on the campus.

Foreign Area Studies

The Foreign Area Studies program enables students who wish to do so to choose an interdisciplinary concentration in the language and culture of a foreign area. Such a concentration may include courses in the major and also in the minor field, if a minor

is chosen. Foreign Area Studies do not replace majors or minors; they may well supplement either or both. Programs currently available are: East European Studies, German Studies, Italian Studies, Latin American Studies, and Spanish Studies. It is likely that other programs will be added in the near future. A faculty adviser coordinates each Foreign Area Studies program and advises interested students. For current information about advisers and programs, students should consult the office of the Dean of the College.

Study at Salem College

For full-time students, Wake Forest and Salem College share a program of exchange credits for courses taken at one institution because they are not offered at the other. An application must be approved by the academic adviser and the Dean of the College or the Dean of the School of Business and Accountancy. Except in courses of private instruction, there is no additional cost to the student. Grades and grade points earned at Salem College are evaluated as if they were earned at Wake Forest.

Summer Study

For full-time students, courses taken in the summer at another college or university require the advance approval of the chairman of the department concerned and the Registrar. Courses taken elsewhere on the semester hour plan are computed as transfer credit at 1.125 credits for each approved semester hour.

In addition to regular courses, a number of special summer programs for credit are described in the bulletin of the summer session.

Transfer Credit

All work attempted in other colleges and universities is to be reported to the Registrar of Wake Forest University. Students wishing to receive transfer credit for work satisfactorily completed elsewhere must obtain faculty approval, preferably in advance. Students should be aware that the minimum grade point average (2.0) for graduation is computed on all work attempted in Wake Forest College and the School of Business and Accountancy, and is also computed on all work attempted in all accredited colleges and universities.

Opportunities for Study Abroad

London

A program of study is offered each semester at Worrell House, the University's residential center near Regent's Park in London. Courses typically encompass aspects of the art, theatre, literature, and history of London and Great Britain. (See for example, Art 2320: *English Art, Hogarth to the Present*, and History 2260: *History of London*, in the course listings of those departments.) Each term a different member of the faculty serves as the director of the program, which accommodates sixteen students. Further information may be obtained in the Office of the Provost.

Venice

For students wishing to spend a semester in Italy, a program of study is available at Casa Artom, the University's residential center on the Grand Canal in Venice. Under various members of the faculty, approximately twenty students focus on the heritage and culture of Venice and Italy. (Courses offered usually include Art 2693: *Venetian Renaissance Art*, Italian 2213: *Spoken Italian*, and other courses offered by the faculty member serving as director.) Students selected for the Venice program are normally required to have completed elementary training in Italian. Limited scholarship aid is available to one or two students each semester to assist with expenses. Further information may be obtained in the Office of the Provost.

France

For students wishing to study in France, arrangements are made for a semester's instruction at the University of Dijon. Under a faculty residential adviser from the Department of Romance Languages, courses are taken at the University of Dijon by student groups of varying levels of preparation. (A major in French is not required, but French 221 or its equivalent is recommended.)

Spain

For students wishing to study in Spain, arrangements are made for a semester's instruction at the University of Salamanca. Under a faculty residential adviser from the Department of Romance Languages, courses are taken at the University of Salamanca by student groups of varying levels of preparation. (A major in Spanish is not required, but Spanish 221 or its equivalent is recommended.)

India

For students who can spend a semester in India, arrangements are made for instruction in an Indian college or university and travel in the country for a period of about three months. (Written approval from the Dean of the College is necessary for fulfilling basic, divisional, or major requirements.)

Independent Study

For students who wish to spend one or more semesters in an approved college or university abroad, arrangements must be made with the chairman of the department, the major and the Dean of the College. An approved application for study abroad must also be filed with the Registrar. Up to thirty-six credits for a full-year program may be granted by the college upon satisfactory evaluation of the work taken, but this credit is not guaranteed. Students not on a College program must apply for readmission to the University. Credit is computed as transfer credit at 3.375 credits for three approved semester hours taken abroad.

In addition, the Independent Study Program of the Experiment in International Living is recognized by the College. To participate in this program a student must be regularly enrolled and plan to return to the College after study abroad, and arrange-

ments must be made with the chairman of the department of the major and the Dean of the College. Up to fourteen credits for a one-semester program may be granted upon evidence of satisfactory completion of work taken, but this is subject to evaluation by the Dean of the College.



Requirements for Degrees

Degrees Offered

The College offers undergraduate programs leading to the Bachelor of Arts and Bachelor of Science degrees. The Bachelor of Arts degree is conferred with a major in anthropology, art, biology, chemistry, classical studies, economics, English, French, French-Spanish, German, Greek, history, Latin, music, philosophy, physics, politics, psychology, religion, sociology, Spanish, or speech communication and theatre arts. The Bachelor of Science degree is conferred with a major in chemistry, mathematical economics, mathematics, physical education, or physics. The Bachelor of Arts degree is available with a major in intermediate education or education with a state teacher's certificate in social studies, and the Bachelor of Science degree is available with a major in education with a state teacher's certificate in science. The Bachelor of Science degree may be conferred in combined curricula in dentistry, engineering, forestry and environmental studies, medical sciences, medical technology, and the physician assistant program. The School of Business and Accountancy offers undergraduate programs leading to the Bachelor of Science degree with a major in accountancy or business. (See page 163 of this Bulletin.)

A student who receives the Bachelor of Arts or Bachelor of Science degree may not hereafter receive the other of the two degrees.

General Requirements

Students in the College have considerable flexibility in planning their course of study. Except for two semesters of required physical education, only three specific courses are required, one in English composition and two in a foreign language. To complete preparation for more specialized work in a major field or fields, students elect three courses in each of four divisions of the undergraduate curriculum: (1) literature and the arts; (2) the natural sciences and mathematics; (3) history, religion, and philosophy; and (4) the social and behavioral sciences. Normally the basic and divisional requirements are completed in the freshman and sophomore years and requirements in the field or fields of the major are completed in the junior and senior years.

All students must complete (1) the basic and divisional requirements (unless accepted for the Open Curriculum), (2) a course of study approved by the department or departments of the major, and (3) elective courses for a total of 144 credits. No more than sixteen credits toward graduation may be earned from among all of the following courses: Military Science 110, 111, 112, 113, 114, 116, 202S, 211, 212, 251, 252; Music 111-123 (ensemble courses); and elective 100-level courses in physical education.

All students must earn a C average on all courses attempted. A student who transfers work from another college or university must earn a C average on all courses attempted in the College and a C average on all work attempted at all colleges and universities. Of the 144 credits required for graduation, at least seventy-two

must be completed in the undergraduate schools of Wake Forest University, including the work of the senior year (except for combined degree curricula).

A student has the privilege of graduating under the requirements of the bulletin of the year in which he or she enters, provided that course work is completed within six years of entrance. After six years, the student must fulfill the requirements for the class in which he or she graduates.

Basic Requirements

All students must complete three required basic courses (unless waived through procedures established by the departments concerned):

English 110 (composition) or 112 (composition and literature)

Foreign language 153 (intermediate level)

Foreign language (literature)

French 213, 214, 216, 217, or the equivalent

Spanish 215, 216, or the equivalent

Italian 215, 216, or the equivalent

German 211 or 212

Russian (any literature course)

Greek 211 or 212

Latin 211, 212, or 216

Hebrew 211

Hindi 211

No credit is given for any language course below the one recommended by the department on the basis of the placement test unless the student is given permission by the Language Placement Appeals Board.

Divisional Requirements

All students must complete three courses in each of the four divisions of the undergraduate curriculum (unless exempted by completion of Advanced Placement requirements):

Division 1. Literature and the Arts (three courses: no more than one course from any one of the four groups)

1. English literature (English 160 or 165)
2. American literature (English 170 or 175)
3. Foreign literature (other than the one used for the basic requirement)
 - Classical languages
 - Greek 211, 212, 231, 241, or 242
 - Latin 211, 212, 216, 221, 225, or 226
 - Classics 253, 254, 263, 264, 265, or 272
 - German 211 or 212
 - Romance languages (French, Spanish, or Russian literature)
 - Humanities 213, 214, 215, 216, 217, 373, 374, 375, or 378.

4. Fine Arts

- Art 103 or 111
- Music 101 or 102
- Theatre Arts 121

Division II. The Natural Sciences and Mathematics (three courses, selected from two of the four groups)

1. Biology 111, 150, or 151
2. Chemistry 111, 112 (unless advanced preparation indicates a higher course)
3. Physics 101, 111, 112, 121, 122
4. Mathematics 111, 112, 107, 108, 157 (any one; if two, any pair other than 108, 111, and 107, 157)

Division III. History, Religion, and Philosophy (three courses; no more than one course from each group)

1. History 101 or 102
2. Religion (any course other than 218, 225, 237, 239, 240, 265, 266, 270, 273, 282, 286, 287, 292, and 346)
3. Philosophy 111, 171, or 172

Division IV. The Social and Behavioral Sciences (three courses; no more than one from any one department)

1. Anthropology 151 or 152
2. Economics 111, or 152 (note that 151 is prerequisite for 152.)
3. Politics 113, 114, or 115
4. Psychology 151
5. Sociology 151

Requirement in Physical Education

All students must complete Physical Education 111 and one additional course selected from the 100-series of physical education courses. The requirement must be met before enrollment in additional physical education elective courses, and in any case before the end of the second year.

Proficiency in the Use of English

Proficiency in the use of the English language is recognized by the faculty as a requirement in all departments. A *composition condition*, indicated by *cc* under the grade for any course, may be assigned in any department to a student whose writing is unsatisfactory, regardless of previous credits in composition. The writing of transfer students is checked during the orientation period each term, and students whose writing is deficient are given a *composition condition*. For removal of a composition condition the student is required to take English I I during the first semester for which he or she registers following the assignment of the *cc*. Removal of the deficiency is prerequisite to graduation.

Completion of Lower Division Requirements

The basic and divisional course requirements are to be completed, where possible by the end of the sophomore year. Some students will find it necessary to postpone some of these requirements until the junior year in order to begin certain courses essential to the major field; but a minimum of three courses from among the requirements must appear on the student's program each semester until such requirements have been met.

No course requirements may be set aside or replaced by substitutes except through regular procedures already established by the faculty, or through a specific vote of the faculty in regular session.

Admission to the Upper Division

The work in the lower division is intended to give the student an introduction to the various fields of knowledge and to lay the foundation for concentration in a major subject and related fields during the junior and senior years.

Before applying for admission to the upper division and beginning work on a major subject, a student should have seventy-two credits and 144 grade points in the lower division. In no case is a student admitted to the upper division with fewer than sixty credits and 120 grade points.

Fields of Study in the Upper Division

Thirty days before the end of the sophomore year each student is required to indicate to the Registrar and to the department or departments concerned the selection of a major for concentration during the junior and senior years. Before the selection is formally approved by the Registrar, the student must present a written statement from the authorized representative of the department or departments indicating that the student has been accepted as a candidate for the major in the department. An adviser is available to assist the student in planning a course of study for the junior and senior years. A department which rejects a student as a major must file with the Dean of the College a written statement indicating the reason(s) for the rejection.

A student wishing to major in business or in accountancy should make application to the School of Business and Accountancy. (See p. 164 of this bulletin.)

The undergraduate schools make a reasonable effort to provide ample space in the various major fields to accommodate the interests of students. It must be understood, however, that the undergraduate schools cannot undertake to guarantee the availability of space in a given major field or a given course, since the preferences of students change and there are limits to both faculty and facilities.

After the beginning of the junior year a student may not change from one major to another without the approval of the departments concerned. The student's course of study for the junior and senior years includes the minimum requirements for the departmental major, with other courses selected by the student and approved by the adviser.

At least half of the major must be completed at Wake Forest University. Students

preparing for the ministry are advised to elect three courses in religion beyond the course included in the divisional requirements.

The following fields of study are recognized for the major: accountancy, anthropology, art, biology, business, chemistry, classical studies, economics, education, English, French, French-Spanish, German, Greek, history, Latin, mathematical economics, mathematics, music, philosophy, physical education, physics, politics, psychology, religion, sociology, Spanish, and speech communication and theatre arts.

Maximum Number of Courses in a Department

Within the College, a maximum of forty-eight credits in a single field of study is allowed within the 144 credits required for graduation. Fifty-six credits toward graduation are allowed in any department authorized to offer two fields of study or more.

These stipulations exclude required related courses from other departments. They further exclude, for students majoring in English, English 110 and 112; for students majoring in mathematics and minoring in computer science, Mathematics 111 and 112; and, for students majoring in a foreign language, elementary courses in that language. These limits may be exceeded in unusual circumstances only by action of the Dean of the College.

Options for Meeting Major Requirements

For purposes of satisfying graduation requirements a student must select one, and only one, of the following options which will receive official recognition on a student's permanent record: (1) a single major, (2) a joint major, (3) a single major and a minor, (4) a double major. *In addition to the options above, a student may complete the requirements of a foreign area studies program.*

Double Majors and Joint Majors

A student may major in two departments in the College with the written permission of the chairman of each of the departments and on condition that the student meet all requirements for the major in both departments. For administrative purposes, the student must designate one of the two fields as the primary major, which appears first on the student's record.

A joint major consisting of fifty-six credits in two fields of study is available in classical studies, in mathematical economics, and in French-Spanish.

Minors

A minor is not required. Those students, however, who select a single major—not those working toward a double or joint major—may choose a minor field from among the following: anthropology, art, biology, chemistry, computer science, educational studies, professional education, English, French language and culture, French literature, German, Greek, history, Latin, mathematics, music, philosophy,

physical education, physics, politics, psychology, religion, sociology, Spanish language and culture, Hispanic literature, speech communication and theatre arts.

For details of the various minors, see the appropriate departmental headings in the section of this catalog that lists course offerings.

Interdisciplinary Minor

A Minor in Cultural Resource Preservation. The Department of Anthropology, Art History, and Sociology offer an interdisciplinary minor in Cultural Resource Preservation (CRP) which will give students preliminary training in the field of historical preservation and cultural resource management aiming at the protection and enhancement of archeological, historical, and architectural resources.

The minor requires the following twenty credits: Anthropology 310, *Museum Design and Operation*; Anthropology 361, *Conservation Archeology*; Art 223, *American Architecture*; History 366, *Studies in Historic Preservation*; and Sociology 333, *The Urban Community*. It is recommended but not required that students take some of the following courses: Anthropology 151, *General Anthropology I: Archeology and Human Evolution* (may count as a Division IV requirement); Sociology 151, *Principles of Sociology* (may count as a Division IV requirement); Anthropology 356, *Old World Prehistory*; Anthropology 359, *Prehistory of North America*; Art 294, *Modern Architecture*; Art 393, *Practicum*; Anthropology 261, *Museum Practicum*; and History 398, *Individual Study*. Students should consult the adviser for the minor in CRP before declaring such a minor. Students are strongly advised to declare their intention to minor in Cultural Resource Preservation during the first semester of their junior year. Successful completion of the minor in Cultural Resource Preservation will be noted on the student's transcript.

Foreign Area Studies

The Foreign Area Studies programs enable students to choose an interdisciplinary concentration in the language and culture of a foreign area. An area studies concentration may include courses in the major and also in the minor field, if a minor is chosen. Foreign Area Studies do not replace majors or minors; they may well supplement either or both. A faculty adviser coordinates each Foreign Area Studies program and advises interested students. Further questions may be directed to Jo Reinhardt, Coordinator of International Studies. Programs currently available are:

(a) *East European Studies.* Coordinator, Carl Moses (Politics)

Russian 215 is required plus twenty-four credits from the following: Russian 216, History 331, History 332, Politics 232, Economics 255, Anthropology 37, Humanities 215, and Seminars, Colloquia, or Independent Studies in one of the departments above.

(b) *German Studies.* Coordinator, Donald Schoonmaker (Politics)

Twelve or thirteen credits from German 153, 211, 212, 217, or 220 are required. In addition, the student should take four courses from the following groups, at least one from each group: (1) History 320 and History/German 231; (2) Politics 233 and 273; (3) Philosophy 241 and 242. Appropriate credit in the above area

could be satisfied by study abroad in Germany.

(c) *Italian Studies*. Coordinator, Bianca Artom (Romance Languages)

Italian through the 215 level is required, plus three courses from the following groups, at least one each from 2 and 3. (1) Literature: Italian 216, Classics 251, Classics 272, and Religion 277; (2) Fine Arts: Art 245, 267, 268, 296C, and 2693, and Music 181, 201, 206, 220, and 221; (3) History and the Social Sciences: Classics 271, History 221, 222, 223, and 398. A semester in Venice or another approved course of study in Italy is also required.

(d) *Latin American Studies*. Coordinator, Gregorio Martin (Romance Languages) History 271, Politics 236, and Spanish 216, and 223 are required, plus twelve credits from the following: Anthropology 305, Anthropology 342, Economics 252, Politics 235, Spanish 219, 221, and 229. Students are asked to take either Spanish 227, 265, or 266 to fulfill the foreign literature requirement in Division I and are strongly urged to spend a semester studying in Latin America.

(e) *Spanish Studies*. Coordinator, Kathleen Glenn (Romance Languages) History 2019, Sociology 2029, Spanish 215, and Spanish 224 are required plus twelve credits from the advanced courses in Spanish language and literature offered by the Department of Romance Languages or from the courses offered at the University of Salamanca (currently these include Spanish 1829, 2059, 2259, 2749, and Art 2029). Students are required to participate in the Semester in Spain program at Salamanca and are strongly urged to live at the Casa Hispana at Graylyn for at least one semester.

Senior Testing

All seniors are required to participate in a testing program designed to provide objective evidence of educational development and employing measures of academic achievement such as selected portions of the Graduate Record Examination and/or other tests deemed appropriate by the Committee on Academic Affairs. The tests are administered during the spring semester, and relevant results are made available to the student for his or her information. The primary purpose of the program is to provide the University with information for assessing the total educational process. The program does not supplant the regular administration of the Graduate Record Examination for those students applying for admission to graduate school.

Combined Degrees in the School of Law

A combined course makes it possible for a student to receive the two degrees of Bachelor of Arts and Juris Doctor in six academic years or their equivalent instead of the usual seven years. The first three years of the combined course are in the College and the last three are in the School of Law.

A student pursuing this plan must (1) complete the basic and divisional course requirements and become qualified for admission to the upper division; (2) initiate application for admission to the School of Law and secure through the law school adviser, who is a member of the law faculty, permission to pursue the combined course plan; (3) perform the junior year of study in the College under the supervision of a departmental academic adviser and the law school adviser; and (4) complete at

least 110 credits in the College with a minimum average of C and the first full year of law in the School of Law with an average sufficient to remain in the School of Law (Admission to the School of Law is based on the applicant's entire undergraduate record, Law School Admission Test scores, and other criteria, and permission to pursue the combined degree program does not constitute admission to the School of Law.)

The last year of required college academic work must be taken in the College. A student who transfers from another college or university at the end of the first or second year must maintain a minimum average of C on all academic work undertaken in the College.

A student who completes the program successfully is eligible to receive the Bachelor of Arts degree at the end of the first full year in the School of Law; the Juris Doctor degree is awarded the student who, having received the Bachelor of Arts degree, also fulfills requirements for the Juris Doctor degree. The quantitative and qualitative academic requirements set forth here are minimum requirements for the successful completion of the combined degree program; satisfying the requirement of the three-year program in the College does not necessarily entitle an applicant to admission to the School of Law.

Combined Degrees in Medical Sciences

A limited number of students may receive a Bachelor of Science degree with a major in medical sciences.

Under this plan the student fulfills the requirements for the degree by completing three years of work in the College with a minimum average grade of C and by satisfactorily completing the first full year of medicine (at least thirty semester hours as outlined by the faculty of the Bowman Gray School of Medicine, with a record entitling promotion to the second year class. (Under current scheduling, successful candidates receive the baccalaureate degree in August rather than May.) At least one year (thirty-six credits) of the required academic work must be completed in the College.

Candidates for the Bachelor of Science degree with a major in medical sciences must complete before entering the School of Medicine for the fourth year of work the basic course requirements; the divisional course requirements in Divisions I, II and IV; the physical education requirement; Biology 111, 150, 151 (any two courses); Biology 312, 320, 321, 326, 351, 360, 370 (any two courses); Chemistry 111 and 112; Chemistry 221 and 222; Physics 111 and 112; mathematics (one course); and electives for a total of 108 credits.

The completion of the prescribed academic subjects does not necessarily entitle an applicant to admission to the School of Medicine. (All other factors being equal, applicants who have done all their work in the College are given preference.)

Combined Degrees in Medical Technology

Students may qualify for the Bachelor of Science degree in medical technology by completion of the academic requirements outlined below and by satisfactory completion

ion of the full program in medical technology offered by the Division of Allied Health Programs of the Bowman Gray School of Medicine with at least a grade of C in all courses taken in the program in medical technology. At least one year (thirty-six credits) of the required academic work must be completed in the College. (Under current scheduling, successful candidates receive the baccalaureate degree in August rather than May.)

Students seeking admission to the program must file application in the fall of their junior year with the division of Allied Health Programs of the School of Medicine. Students are selected based upon recommendations of teachers, college academic record, Allied Health Professions Admissions Test score, impressions made in personal interviews, and work experience (not essential, but important). Students must complete the basic course requirements; the divisional course requirements in Divisions I, III, and IV; the physical education requirement; Biology 111, 150, 151 (three courses or equivalents); Biology 326; Chemistry 111, 112, 221, and 222; mathematics (one course); and electives for a total of 108 credits. Desirable electives outside the area of chemistry and biology include physics, data processing, and personnel and management courses. (Interested students should consult a biology department faculty member during the freshman year for further information.)

Degrees in the Physician Assistant Program

Students may qualify for the Bachelor of Science degree in the physician assistant program by completion of three years (108 credits) in the College with a minimum average grade of C, and by satisfactory completion of the full twenty-four month course in the physician assistant program offered by the Division of Allied Health Programs of the Bowman Gray School of Medicine. At least one year (thirty-six credits) of the required academic work must be completed in the College. Candidates for the degree must complete the basic course requirements, the divisional course requirements, and the physical education requirement; at least four courses in biology (including one course in microbiology); and at least four courses in the social sciences (sociology, psychology, and economics are recommended). A course in statistics and three or four courses in chemistry are also recommended. Applicants to the program must possess a minimum of six months clinical experience in patient care services. (Interested students should consult a biology department faculty member during the freshman year for further information.)

Degrees in Microbiology

Students may qualify for the Bachelor of Science degree in microbiology by completion of three years (112 credits) in the College with a minimum average grade of C, and by satisfactory completion of a thirty-two-hour major in microbiology in the Bowman Gray School of Medicine. At least one year (thirty-six credits) of the required academic work must be completed in the College. Candidates for the degree must complete the basic course requirements, the divisional course requirements, and the physical education requirement; Microbiology 302, 304 (or Biology 302), 404, and Biology 370; additional courses to complete the major will be selected

from Microbiology 401, 403, 406, 407, 408, 415, 416, 417, 418, Biology 321, 374, and 391, 394. Required related courses are two courses in physics and at least two courses in organic chemistry. Additional chemistry and mathematics courses may be suggested by the major adviser for students progressing toward advanced work in microbiology. The student should contact the microbiology adviser during the sophomore year to establish a program of study. Work on the major must commence no later than the fall semester of the junior year.

Degrees in Dentistry

A student may fulfill the requirements for a Bachelor of Science degree with a major in dentistry by completing three years of work in the College with a minimum average grade of C, and by satisfactorily completing the first two years of work in one of certain approved dental schools designated by the University, with a record entitling advancement to the third year class.

For this degree the requirements in the College are the same as those for the degree with a major in medical sciences.

Degrees in Engineering

The college cooperates with North Carolina State University and other engineering schools in offering a broad course of study in the arts and sciences combined with specialized training in engineering. A program for outstanding students covers five years of study, including three initial years in the College and two full years of technical training in one of the fields of engineering. (Depending upon the field chosen, it may be advisable for a student to attend the summer session in the engineering school after transfer.) Upon successful completion of the five years of study, the student receives the degree of Bachelor of Science from the University and the degree of Bachelor of Science in one of the specialized engineering fields from the engineering school.

The curriculum for the first three years must include the basic and division requirements for the Bachelor of Science degree. Suggested courses for the freshman year are English 110 and 160 (or a foreign literature); foreign language courses 211, 215, or 216; Mathematics 111, 112; Physics 121, 122; and Physical Education 111, 112. Suggested courses for the sophomore year are English 170 (or a foreign literature); Philosophy 111; Mathematics 113 or 251; Physics 141, 161, and 162; and Chemistry 111, 112. Suggested courses for the junior year are a history course, religion course, Mathematics 311, and Economics 151, 152.

This rigorous curriculum demands special aptitude in science and mathematics. Electives are chosen in consultation with the chairman of the Department of Physics.

Degrees in Forestry and Environmental Studies

The College cooperates with the Duke University School of Forestry and Environmental Studies to offer students interested in these areas the possibility of earning both bachelor's and master's degrees within five years. For details about the program students should consult a faculty member in the Department of Biology.



Courses of Instruction

Plans of study, course descriptions, and the identification of instructors apply to the academic year 1981–82, unless otherwise noted, and reflect official faculty action through March 8, 1982.

The University reserves the right to change programs of study, academic requirements, assignment of lecturers, or the announced calendar without prior notice.

Odd-numbered courses are normally taught in the fall, even-numbered in the spring. Exceptions are noted after course descriptions. Number of credits is shown by numerals immediately after the course title—for example, (3) or (3,3). The symbols P— and C— followed by course numbers or titles are used to show prerequisites and corequisites in the department.

Courses 101–199 are primarily for freshmen and sophomores; courses 200–299 are primarily for juniors and seniors; courses 301–399 are for advanced undergraduates and graduate students. (Other graduate courses are described in the Bulletin of the Graduate School; a complete listing of summer courses is in the Bulletin of the Summer Session.)

Anthropology

Stanton K. Tefft, Chairman

Professors E. Pendleton Banks, Stanton K. Tefft

Associate Professors David K. Evans, J. Ned Woodall

Assistant Professor David S. Weaver

Curator/Instructor, Museum of Man, Janine B. Cutchin

Adjunct Assistant Professor Jay R. Kaplan

Visiting Lecturer, Gayle S. Russell

A major in anthropology requires a minimum of thirty-six credits and must include Anthropology 151, 152, 340, 380, 388, and either 356 or 359.

Students are encouraged but not required to enroll in a course offering intensive field research training. However, only four credits from Anthropology 381, 382 and four credits from Anthropology 383, 384 may be used to meet major requirements. Additional courses are counted within the limits specified for a single field of study.

A minimum grade point average of 2.0 in anthropology courses is required at the time the major is declared. A minimum grade point average of 2.0 in all anthropology courses is required for graduation.

A minor in anthropology requires twenty-four credits and must include Anthropology 151, 152, and 340. Minors will not receive credit for Anthropology 388, 398 or 399. Only four credits from Anthropology 207, 305, 365, 383, and 384 may be used to meet minor requirements and departmental permission must be obtained for minor credit in these courses.

To be graduated with the designation "Honors in Anthropology," highly qualified majors are invited to apply to the department for admission to the honors program. They must complete a senior research project, document their research, and satisfactorily defend their work in an oral examination. For additional information members of the departmental faculty should be consulted.

51. General Anthropology I: Archeology and Human Evolution. (4) Origin and evolution of man with a focus on human biological and sociocultural change during the Plio-Pleistocene. (Credit will not be granted for both Anthropology 151 and Anthropology 162.)

52. General Anthropology II: Cultural Anthropology. (4) A cross-cultural analysis of human institutions with a survey of major theories explaining cultural variety and human nature. (Credit will not be granted for both Anthropology 152 and Anthropology 341.)

07. Mountain Folklore in North Carolina. (4) The role folklore plays in all human cultures in general and in the culture of the mountain people of Western North Carolina in particular. Field trips to mountain counties conducted. *Usually offered in summer.* P—Permission of instructor.

60. Archeological Laboratory Practicum. (2) Instruction in artifact cleaning, preserving, cataloging, and analysis; preparation of museum exhibits; familiarization with darkroom procedures; drafting and report preparation. P—Permission of instructor.

61. Museum Practicum. (3) Designed to give the student practical experience while working at the Museum of Man in six basic areas of museum operation: administration, research, curatorial duties, conservation, exhibition design, and education. —Permission of instructor.

62. Physical Anthropology Practicum. (2) Practical experience in current problems in physical anthropology. P—Anthropology 151.

05. Conflict and Change on Roatan Island (Honduras). (4) Readings and field research focusing upon the barriers and processes of sociocultural and technological change in a heterogeneous island community. *Usually offered in summer.* P—Anthropology 151 or Anthropology 152 and permission of instructor.

10. Museum Design and Operation. (4) The principles of museum design and operation through lectures, readings, workshops with visiting experts in the field, and field trips to neighboring museums (possibly to Washington, D.C.). Students have an opportunity to put some of the principles in practice by planning and designing exhibits in the Museum of Man. P—Permission of instructor.

21. The Anthropology of Art. (4) The arts (primarily visual) in folk and tribal cultures from comparative, structural, and functional points of view. P—Permission of instructor.

40. Images of Man: Perspectives on Anthropological Thought. (4) A study and valuation of the major anthropological theories of man and society, including cultural evolutionism, historical particularism, functionalism, structuralism, cultural ecology, and cultural materialism. The relevance and significance of these theories to modern anthropology are discussed. P—Anthropology 151 and Anthropology 152, and sophomore or junior standing, or permission of instructor.

42. Tradition and Conflict in Latin America. (4) Socio-cultural perspectives on

contemporary problems in Latin America and the Caribbean. P—Anthropology 151 or Anthropology 152 or permission of instructor.

343. Socio-cultural Development in the Third World. (4) Analytical survey of problems facing Third World nations and the application of anthropology in chaotic conflict situations today. P—Anthropology 151 or Anthropology 152 or permission of instructor.

344. Medical Anthropology. (4) The impact of Western medical practices and theories on non-Western cultures and anthropological contributions to the solving of world health problems. P—Anthropology 151 or permission of instructor.

351. Physical Anthropology. (4) Introduction to biological anthropology; human biology, evolution, and variability. P—Anthropology 151.

352. Laboratory Methods in Physical Anthropology. (1) Basic methods utilized by physical anthropologists to gather data, such as blood grouping, measurements, dermatoglyphics, and dental castings. Lab—two hours. P—Permission of instructor.

353. Peoples and Cultures of Africa. (4) The ethnology and prehistory of Negro Africa south of the Sahara. P—Anthropology 151 or Anthropology 152.

354. Primitive Religion. (4) The worldview and values of non-literate cultures as expressed in myths, rituals, and symbols. P—Anthropology 151 or Anthropology 152.

355. Language and Culture. (4) An introduction to the relations between language and culture, including methods for field research. P—Anthropology 151 or Anthropology 152.

356. Old World Prehistory. (4) Survey of Old World prehistory, with particular attention to geological and climatological events affecting culture change. P—Anthropology 151 or permission of instructor.

358. The American Indian. (4) Ethnology and prehistory of the American Indians. P—Anthropology 151 or Anthropology 152.

359. Prehistory of North America. (4) The development of culture in North America as outlined by archeological research, with an emphasis on paleoecology and sociocultural processes. P—Anthropology 151 or permission of instructor.

360. Archeology of the Southeastern United States. (4) A study of human adaptation in the Southeast from Pleistocene to the present, emphasizing the role of ecological factors in determining the formal aspects of culture. P—Anthropology 151.

361. Conservation Archeology. (4) A study of the laws, regulations, policies, programs, and political processes used to conserve prehistoric and historic cultural resources. P—Anthropology 151 and Anthropology 359 or permission of instructor.

362. Human Ecology. (4) The relations between man and the inorganic and organic environments as mediated by culture; laboratory experience with aerial photography and other remote sensing techniques. P—Anthropology 151 or Anthropology 152 or permission of instructor.

364. Human Osteology. (4) A survey of human skeletal anatomy and analysis.

emphasizing archeological and anthropological applications. P—Anthropology 151 and permission of instructor.

65. Field Research in Physical Anthropology. (2, 3, or 4) Training in techniques or the study of problems of physical anthropology, carried out in the field. *Usually offered in the summer.* P—Permission of instructor.

66. Human and Non-Human Evolution. (4) Investigation of primate and human evolution, both in anatomy and in behavior. P—Anthropology 151 and permission of instructor.

71. European Peasant Communities. (4) Lectures, reading, and discussion on selected communities and their sociocultural context, including folklore, folk art, and processes of culture change. P—Anthropology 151 or Anthropology 152 or permission of instructor.

80. Anthropological Statistics. (4) Basic statistics, emphasizing application in anthropological research. (A student who receives credit for this course may not also receive credit for Biology 348, Business 201, Mathematics 157, or Sociology 380.)

81, 382. Archeological Research. (4, 4) The recovery of anthropological data through the use of archeology, taught in the excavation and interpretation of a prehistoric site. P—Anthropology 151.

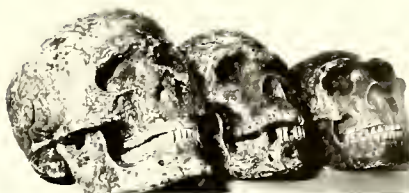
83, 384. Field Research in Cultural Anthropology. (4, 4) Training in techniques or the study of foreign cultures, carried out in the field. P—Anthropology 151 or Anthropology 152.

85, 386. Special Problems Seminar. (4) Intensive investigation of current scientific research within the discipline which concentrates on problems of contemporary interest. P—Permission of instructor.

87. Advanced Statistical Analysis in Anthropology. (4) Principles of multivariate statistical analysis and applications to anthropological problems. P—Anthropology 80.

88. Senior Seminar. (4) A review of the contemporary problems in the fields of archeology and physical and cultural anthropology. P—Senior standing or permission of instructor.

98, 399. Individual Study. (1, 2, 3, or 4) A reading, research, or internship course designed to meet the needs and interests of selected students, to be carried out under the supervision of a departmental faculty member.



Art

Margaret S. Smith, Chairwoman

Visiting Professor Terisio Pignatti (Venice)

Associate Professors Robert Knott, Margaret S. Smith

Lecturers David Bindman (London), Marvin S. Coats

Instructors Gary A. Cook, Paul H. D. Kaplan, Andrew W. Polk III

Elizabeth A. Sutherland, Harry B. Titus Jr.

Gallery Director Victor Faccinto

The department offers courses in the history of art and in the practice of drawing, painting, printmaking, and sculpture. The program is designed to introduce students to the humanistic study of the visual arts. The courses are intended to increase the student's understanding of the meaning and purpose of the arts and their historical developments, their role in society, and their relationship to other humanistic disciplines. The work in the classroom and studio is designed to intensify the student's visual perception and to develop a facility in a variety of technical processes. A visiting artist program and varied exhibitions in the gallery of the Scales Fine Arts Center supplement the regular academic program of the department.

The major in art requires forty credits. For an art history major, eight courses are to be in art history and two in studio. For a studio art major, eight courses are to be in studio art and two in art history.

The studio art major may earn teacher certification in art education (K-12) by cross registration with the Salem College teacher education program.

A minor in art requires five courses, including at least one course in art history and one course in studio art.

Any student interested in majoring or minoring in art should consult the chairwoman of the art department.

Art History*

103. Introduction to the Visual Arts. (4) An introduction to the arts of various cultures and times, with discussions of technique, style, methodology, and terms. May be used to satisfy a requirement in Division I.

221. Idea and Form in Indian Art. (4) An examination of Indian ideas on the sacred and profane as revealed in architectural and sculptural forms in Hindu, Buddhist, and Muslim art in India.

228. Egyptian Art. (4) The art and architecture of ancient Egypt from the predynastic period through Roman Egypt.

230. African Art. (4) The traditional arts of Africa south of the Sahara.

231. American Art. (4) The survey of American painting from 1600 to 1900.

233. American Architecture. (4) A survey of American architecture from 1600 to 1900, with emphasis on the eighteenth and early nineteenth centuries.

**Open to qualified freshmen and sophomores*

235. The Arts in America. (4) A cultural and historical survey of the arts in America from early settlement to the present day. Attention is given to architecture, painting, sculpture, decorative arts, graphic arts, photography, and some commercial images as expressions of their time.

241. Ancient Art. (4) A survey of architecture, painting, and sculpture from the prehistoric through the late Roman periods.

244. Greek Art. (3) A survey of architecture, painting, and sculpture from the prehistoric through the Hellenistic periods.

245. Roman Art. (4) A survey of Etruscan and Roman architecture, painting, and sculpture.

246. Greek and Roman Architecture. (4) A survey of classical architecture, from the Archaic Greek through the late Roman period.

250. Twentieth Century American Art and Literature. (4) An exploration of the ideas, values, and feelings found in the art and literature of twentieth century figures such as Kandinsky, Stevens, Picasso, and Kafka.

251. Women and Art. (4) A historical examination of the changing image of women in art and the role of women artists.

252. Medieval Art. (4) A survey of painting and sculpture in Europe from 400 to 1400.

253. Medieval Architecture. (4) A survey of architecture from the time of Constantine to the beginning of the Italian Renaissance.

254. Romanesque Sculpture. (4) An examination of the re-emergence and development of sculpture in Western Europe during the period 1000–1150.

256. History of Books and Printing. (2–4) An examination of the development of the book from the invention of printing to the present.

257. Printing on the Hand Press. (4) A study of the history of printing and books combined with the practical experience of learning the art and craft of printing. The objectives of the course are to provide a basis for the appreciation of fine printing and to allow the student an opportunity to learn the techniques of hand printing. P—Permission of instructor.

266. Art in the Age of Discovery. (4) An exploration of the visual imagery which recorded the expansion of Western civilization, and the active role which art played in that expansion, from Marco Polo and Giotto to Captain Cook and Tiepolo (c. 1300 – c. 1775).

267. Early Italian Renaissance Art. (4) An introduction to the painting, sculpture, and architecture of Italy from 1250 to 1500, with a concentration on the arts in Florence of the fifteenth century.

268. Italian High Renaissance and Mannerist Art. (4) A study of the arts in Italy of the sixteenth century, with emphasis on the achievement of Leonardo da Vinci, Raphael, Michelangelo, Giorgione, and Titian, and the dissolution of Renaissance

idealism in the art of the early Mannerists.

270. Northern Renaissance Art. (4) A survey of painting, sculpture, graphic art, and patronage in Northern European art from 1300 to the death of Durer in 1528.

271. Studies in French Art. (2) Lectures and field trips in French painting, sculpture and architecture, concentrating on the eighteenth and nineteenth centuries. *Offered in Dijon.*

272. Baroque Art. (4) A survey of European painting and sculpture from 1600 to 1700.

275. History of Landscape Architecture. (4) Study of garden design, beginning with Roman gardens and continuing through the creation of public parks in the nineteenth century.

281. Modern Art to 1900. (4) A survey of European painting and sculpture from 1700 to 1900, emphasizing the nineteenth century.

282. Modern Art after 1900. (4) A survey of European and American painting and sculpture from 1900 to the present. P—Art 281 is recommended.

283. Impressionism. (4) A detailed study of the French Impressionist painters, with some consideration of Impressionism in other art forms.

284. Contemporary American Art. (4) An intensive study of American painting and sculpture from 1950 to the present.

286. Studies in Twentieth Century Art: Myth in Modern Art. (3) An analysis of traditional Western and non-Western myths as expressed and interpreted by twentieth century artists.

291. Individual Study. (4) A course of independent study with faculty guidance.

292. Individual Study. (4) A course of independent study with faculty guidance.

293. Practicum. (4) Internships in local cultural organizations, to be arranged by the Art Department. P/F.

294. Modern Architecture. (4) A survey of European and American architecture from 1750 to the present, emphasizing the twentieth century.

296. Art History Seminar. (4) Offered by members of the faculty or visiting faculty on topics of their choice. A paper is required. P—Permission of instructor.

a. *Ancient Art*

d. *Baroque Art*

g. *American Art*

b. *Medieval Art*

e. *Modern Art*

h. *Modern Architecture*

c. *Renaissance Art*

f. *Contemporary Art*

i. *American Architecture*

297. Seminar: Art and Politics. (4) In-depth examinations of works of art from the medieval period to the Russian Revolution, selected for their significant political content.

2320. English Art, Hogarth to the Present. (4) A survey of English painting, sculpture, and architecture in the Georgian, Victorian, and modern periods. Slide lec-

tures, student reports, museum visits, and lectures. Taught by a special lecturer. *Offered in London.*

2693. Venetian Renaissance Art. (4) A survey of the art of the Venetian Renaissance, with slide lectures and museum visits. *Offered in Venice.*

Anthropology 321. The Anthropology of Art. The arts (primarily visual) in folk and tribal cultures from comparative, structural, and functional points of view. P—Permission of instructor.



Studio Art**

111. Introduction to Drawing and Design. (4) Introduction to the basic elements of two-dimensional and three-dimensional design, to include drawing, painting, and sculpture. Six class hours per week.

112. Introduction to Painting. (4) An introduction to painting fundamentals in a variety of contemporary styles in the oil or acrylic media. P—Art 111.

115. Introduction to Sculpture. (4) An introduction to basic sculptural styles and multi-media, with emphasis on contemporary concepts. P—Art 111.

117. Introduction to Printmaking. (4) Concentrated introduction to one or more of the following areas of printmaking: lithography, intaglio, and silkscreen. P—Art 111.

211. Intermediate Drawing. (4) Continuation of Art 111, with concentrated emphasis on drawing fundamentals and idea development in realistic and abstract styles emphasizing composition, value, line, and form. Six class hours per week. P—Art 111.

212. Intermediate Painting. (4) Continuation of Art 112, with concentrated emphasis on idea development. P—Art 112. May be repeated.

215. Intermediate Sculpture. (4) Continuation of Art 115, with emphasis on idea development. P—Art 115. May be repeated.

217. Intermediate Printmaking. (4) Continuation of Art 117, with emphasis on idea development. P—Art 117. May be repeated.

218. Figure Drawing. (4) Introduction to figure drawing.

219. Advanced Sculpture. (4) A course of individual study with faculty guidance. May be repeated. P—Art 215.

222. Advanced Painting. (4) A course of individual study with faculty guidance. May be repeated. P—Art 212.

223. Advanced Drawing. (4) A course of individual study with faculty guidance. May be repeated. P—Art 211.

229. Advanced Printmaking. (4) A course of individual study with faculty guidance. P—Art 217. May be repeated.

295. Studio Seminar. (2, 4) Offered by members of the faculty or visiting faculty on topics of their choice and related studio activities. P—Permission of instructor.

Asian Studies

Balkrishna Govind Gokhale, Director

The Asian Studies program, established in 1960 with financial assistance from the Mary Reynolds Babcock Foundation, is interdisciplinary in its nature and involves

***Prerequisites may be waived with permission of instructor.*

the cooperation and resources of several departments in the humanities and social sciences. Its objectives are to broaden the traditional curriculum with the infusion of a systematic knowledge and understanding of the culture of Asia.

Asian Studies 211, 212. Asian Studies. (4, 4) Asian thought and civilization. Some dominant themes in Asian thought and their influence on Asian civilizations.

Art 221. Idea and Form in Indian Art. (4) An examination of Indian ideas on the sacred and profane as revealed in architectural and sculptural forms in Hindu, Buddhist, and Muslim art in India.

Chinese 111, 112. Elementary Chinese. (4, 4) Emphasis on the development of listening and speaking skills in Mandarin. Brief introduction to the writing system and to basic sentence patterns. Lab—one hour.

Hindi 111, 112. Elementary Hindi. (4, 4) Attention mainly to basic Hindi grammar, vocabulary building, simple composition, and conversation. Lab—one hour.

Hindi 153. Intermediate Hindi. (4) Advanced practice in Hindi composition and conversation and introduction to literary Hindi. Lab—one hour. P—Hindi 111, 112, or equivalent.

Hindi 211. Hindi Literature. (4) Reading and translation of selected texts in prose and poetry and journalistic Hindi. Lab—one hour. P—Hindi 153.

History 341. Southeast Asia from 1511 to the Present. (4) A survey of the history and culture of Southeast Asia under Western colonial systems, with special reference to economic, social, and cultural developments, the rise of nationalism, and the emergence of new nation-states.

History 342. The Middle East from Suleiman the Magnificent to the Present. (4) Major subjects covered are the rise and fall of the Ottoman Empire, the Arabs and Persians under Ottoman hegemony, the rise of Arab nationalism, and the emergence of the modern Arab states and their roles in the post-World War II era.

History 343. Imperial China. (4) Development of traditional institutions in Chinese society to 1644; attention to social, cultural, and political factors, emphasizing continuity and resistance to change.

History 344. Modern China. (4) The Manchu Dynasty and its response to the Western challenge, the 1911 Revolution, the warlord era and the rise of the Communists, Chinese Communist society, and the Cultural Revolution.

History 345, 346. History and Civilization of South Asia. (4, 4) An introduction to the history and civilization of South Asia, with emphasis on historical developments in the social, economic, and cultural life of the area.

History 347. India in Western Literatures. (4) A one-semester historical survey of images of India in Western literatures, with special reference to religious and philosophical ideas, art, polity, society, and culture.

History 348. Modern Japan. (4) Tokugawa era; Meiji Restoration; industrialization and urbanization; relations with the West; World War II; occupation; Japan in the contemporary world.

History 349, 350. East Asia. (4, 4) An introduction to the social, cultural, and political development of China, Japan, and Korea. 349: to 1600; 350: since 1600.

Politics 234. Government and Politics of East Asia. (4) An analysis of the political institutions and processes in China and Japan, with emphasis on the problems of modernization.

Politics 245. Government and Politics of South Asia. (4) A study of the government of India, Pakistan, Nepal, and Ceylon; emphasis on political organizations, party structures, and subnational governmental systems.

Religion 360. Hinduism. (4) A study of the fundamental features of the Hindu tradition.

Religion 361. Buddhism. (4) A study of the Buddhist tradition, its fundamental features, and its impact on the cultures of Asia.

Religion 364. Islam. (4) A study of the fundamental concepts of Islamic thought and the historical context of its development. Both the ancient and contemporary impact of the teachings of Islam considered.

Biology

Gerald W. Esch, Chairman

Professors Charles M. Allen, Ralph D. Amen, Gerald W. Esch, Mordecai J. Jaffe,
Raymond E. Kuhn, James C. McDonald, Robert L. Sullivan, Peter D. Weigl,
Raymond L. Wyatt

Associate Professors John F. Dimmick, Ronald V. Dimock Jr.,
Herman E. Eure, A. Thomas Olive,

Assistant Professors Ramunas Bigelis, Carole L. Browne, Robert A. Browne,
Hugo C. Lane

Adjunct Professors Harold O. Goodman, Stephen H. Richardson
Adjunct Associate Professor J. Whitfield Gibbons

At the end of the sophomore year a student electing to major in biology meets with a major adviser to plan the course of study for the junior and senior years. The requirements for completion of the major are those in effect at the time of the conference, since the curriculum and departmental requirements may change slightly during the student's period of residence. All majors are required to take Biology 111, 150, 151, 152. Co-major requirements are Chemistry 111 and 112 and two additional courses in the physical sciences.

For students declaring majors in the spring, the requirement for a major is a minimum of forty-one credits in biology. The forty-one credits must include at least six biology courses carrying five credits. A minimum grade average of C on all courses attempted in biology in the College is required for graduation with a major in biology. (Students declaring a major later than the spring should consult with a biology major adviser for the specific major requirement at that time.) A minor in biology requires twenty credits.

Prospective majors are strongly urged to take Chemistry 111, 112 and Biology 111,

50 in the freshman year. They are advised to take Biology 151 and Biology 152 in the sophomore year, as well as organic chemistry. Deviations from this pattern may necessitate summer work to fit the basic courses into an orderly sequence.

Advanced work in many areas of biology may require additional courses in mathematics, the physical sciences, and other areas of biology. The adviser calls these to the attention of the student, depending on individual needs. All 300-level biology courses presume a background equivalent to introductory and intermediate biology (that is, through Biology 152).

Highly qualified majors are invited by the department to apply for admission to the honors program in biology. To be graduated with the distinction "Honors in Biology," they must complete a research project under the direction of a staff member and pass a comprehensive oral examination.

11. Biological Principles. (5) Fundamental principles and concepts in biology. Lab—three hours.

50. Organismic Biology. (5) Morphology and phylogeny of plants and animals. Lab—three hours. P—Biology 111 or permission of instructor.

51. Cell Biology. (5) Molecular and cellular aspects of biology. Lab—three hours. —Biology 111 and Chemistry 111, 112.

52. Population Biology. (4) Population and evolutionary aspects of biology. P—Biology 111 or by permission of instructor.

53. Population Biology-Laboratory. (1) Field and laboratory studies of population biology. To be taken simultaneously with Biology 152.

12. Genetics. (5) A study of principles of inheritance and their application to plants and animals, including man. Laboratory work in the methods of breeding some genetically important organisms and of compiling and presenting data. Lab—three hours.

14. Evolution. (4) Analysis of the theories, evidences, and mechanisms of evolution.

20. Chordates. (5) A study of chordate animals, with emphasis on comparative anatomy and phylogeny. Dissection of representative forms in the laboratory. Lab—four hours.

21. Parasitology. (5) A survey of protozoan, helminth, and arthropod parasites from the standpoint of morphology, taxonomy, life histories, and host/parasite relationships. Lab—three hours.

23. Animal Behavior. (4) A survey of laboratory and field research on animal behavior. (May count as biology or psychology but not both; choice to be determined at registration.)

25. Plant Anatomy. (5) A study of comparative anatomy of the vascular plants, with emphasis on phylogeny. Lab—four hours.

26. Microbiology. (5) The structure, function, and taxonomy of microorganisms with emphasis on the bacteria. Some immunological processes are considered. Lab—four hours.

- 327. Nonvascular Plants.** (5) An examination of representative nonvascular plants with emphasis on morphology and phylogeny. Lab—four hours.
- 328. Vascular Plants.** (5) A comparative survey of the vascular plants, with emphasis on structure, reproduction, classification, and phylogeny. Lab—four hours.
- 331. Invertebrates.** (5) Systematic study of invertebrates, with emphasis on functional morphology, behavior, ecology, and phylogeny. Lab—three hours.
- 333. Vertebrates.** (5) Systematic study of vertebrates, with emphasis on evolutionary physiology, behavior, and ecology. Laboratory devoted to systematic, field, and experimental studies. Lab—four hours.
- 334. Entomology.** (5) A study of insects, with emphasis on structure, development, taxonomy, and phylogeny. Lab—four hours.
- 338. Plant Taxonomy.** (5) A study of the classification of seed plants, with emphasis on the comparative study of orders and families. Lab—four hours.
- 340. Ecology.** (5) Interrelationships among living systems and their environmental structure and dynamics of major ecosystem types; contemporary problems in ecology. Lab—four hours.
- 341. Marine Biology.** (5) An introduction to the physical, chemical, and biological parameters affecting the distribution of marine organisms. Lab—three hours.
- 342. Aquatic Ecology.** (5) A course designed to cover the general principles and concepts of limnology and aquatic biology as they apply to lentic and lotic habitats. A major portion of the field study is centered at the Charles M. Allen Biological Station. Lab—three hours.
- 344. Population and Evolutionary Biology.** (5) Readings and discussions of topics in evolutionary ecology, including population dynamics, life history strategies, competition, niche theory, resource partitioning and community structure, species diversity, and ecological successions. Lab—three hours.
- 348. Quantitative Biology.** (4) An introduction to statistical methods used by biologists, including descriptive statistics, hypothesis-testing, analysis of variance and regression and correlation. (A student who receives credit for this course may not also receive credit for Business 201, Mathematics 157, Sociology 380, or Anthropology 380.)
- 350. Physiology.** (5) A lecture/laboratory course dealing with the physicochemical functions common to multicellular organisms, with emphasis on the principles and processes of nutrition, metabolism, development, and behavior. Lab—three hours.
- 351. Animal Physiology.** (5) A lecture and laboratory course which discusses and demonstrates the principles of bioelectricity and biomechanics. Regulatory principles and the physiology of the cardiovascular, respiratory, and renal systems of vertebrates are covered. Lab—three hours. P—Biology 151.
- 352. Plant Physiology.** (5) A study of the mechanisms by which various plant systems function, thematically structured around the plant life cycle. Lab—three hours.

54. Endocrinology. (4) A lecture course which explores the evolution of hormones and endocrine glands, and the physiology of the main endocrine systems of vertebrates. The last part of the course will involve group presentations of clinical case stories in endocrine homeostasis. P—Biology 151.

55. Developmental Physiology. (5) The application of the principles and postulates of molecular biology to the phenomenon of development in multicellular organisms with emphasis on the genetic and hormonal mechanisms of differentiation, totipotency, and morphogenesis. Lab—three hours.

57. Cryptobiology. (4) The genetic and physiologic mechanisms of common states of biotic rest in multicellular organisms: quiescence, dormancy, diapause, hibernation, estivation, sleep, and coma. Focus will be on the relation of states of biotic rest to senescence and death.

59. Development. (5) A study of development, including aspects of vertebrate, invertebrate, and other developmental systems, emphasizing the regulation of differentiation. Lab—four hours.

62. Immunology. (4) A study of the components and protective mechanisms of the immune system.

70. Biochemistry. (5) A lecture and laboratory course in biochemistry, including principles of biochemistry, chemical composition of living systems, intermediary metabolism, enzyme kinetics, biochemical techniques, and biochemical energetics. Lab—three hours.

71. Biochemistry. (4) A lecture course in biochemistry, including principles of biochemistry, chemical composition of living systems, intermediary metabolism, enzyme kinetics, biochemical techniques, and biochemical energetics.

73. Techniques in Electron Microscopy. (5) An introduction to the electron microscope as an experimental tool in biology. Includes instruction in common techniques used in the field and lecture on recognition and interpretation of cellular ultrastructure.

75. Regulation of Biochemical Processes. (4) An advanced biochemistry course with emphasis on processes that regulate metabolism at both the cellular and organismal levels. Consideration will be given to molecular mechanisms as well as the physiological consequences.

76. Ichthyology. (5) A comparative study of structure/function, classification, and phylogeny of fish. Lab—three hours.

391, 392. Special Problems in Biology. (2, 2) Independent library and laboratory investigation carried out under the supervision of a member of the staff. Pass/Fail or letter grade at discretion of the instructor. P—Permission of instructor.

393, 394. Special Problems in Biology. (2, 2) Courses designed for students who wish to continue special problems beyond Biology 391 and 392. Pass/Fail optional. Not to be counted toward major. P—Permission of instructor.

395. Philosophy of Biology. (4) Lecture/seminar course dealing with the rational

structure of the biologic sciences with emphasis on the reductionistic, organismic and teleonomic paradigms and theories of modern biology. The structure of major bio-scientific theories will receive emphasis.

397. Seminar in Biology. (2-4) Consideration of major biological topics through intensive reading and discussions.

398. Scientific Communications. (3) An introduction to bibliographic and graphic methods, including microscopy, photography, scientific illustration and writing, and preparation of manuscripts. Not to be counted for credit toward degree in biology. Open to juniors or by permission of instructor.

Business and Accountancy

See School of Business and Accountancy, page 163 of this bulletin.

Chemistry

R. E. Nofle, Chairman

**Professors H. Wallace Baird, Phillip J. Hamrick Jr., Roger A. Hegstrom,
Harry B. Miller, Ronald E. Nofle, John W. Nowell**

Associate Professors Paul M. Gross Jr., Willie L. Hinze

Assistant Professors Charles F. Jackels, Susan C. Jackels, Richard R. M. Jones

Visiting Assistant Professor, Robert P. Rooney

Instructor Margaret F. Plemmons

The department offers programs leading to the B.A. and B.S. degrees in chemistry and is on the list of departments certified by the American Chemical Society.

The Bachelor of Arts degree in chemistry includes Chemistry 111, 112; or 113, 114; or 118; 221, 222, 341, 342, 361; Mathematics 111; and Physics 111, 112 or its equivalent. It is recommended that Mathematics 112 be taken before Chemistry 341.

The Bachelor of Science degree in chemistry includes Chemistry 111, 112; or 113, 114; or 118; 221, 222, 334, 341, 342, 361, 371, 391, or 392; Mathematics 111 and 112; and Physics 121, 122 or 111, 112. Other courses which are strongly recommended for the B.S. degree candidate are Mathematics 113, 121 and 251 and Physics 161, 162.

A minor in chemistry requires twenty-three credits in chemistry and must include at least one of the following courses: 323, 334, 341, 342, 361, 362, 371. The department will not accept courses taken Pass/Fail to count towards the minor.

Chemistry 231 is an elective course designed to strengthen the student's background in analytical chemistry. Some professional schools specifically require such a course.

Unless otherwise stated, all chemistry courses are open to chemistry majors on a letter grade basis only. Majors are also required to complete on a letter grade basis the related physics and mathematics courses, both those which are required and those which are strongly recommended.

A minimum GPA of 2.0 in the first two years of chemistry is required of students who elect to major in the department. Admission to any class is contingent upon

satisfactory grades in prerequisite courses, and registration for advanced courses must be approved by the department. Candidates for either the B.A. or B.S. degree with a major in chemistry must have a minimum GPA of 2.0 in their required chemistry courses numbered 200 or above.

Qualified majors are considered for honors in chemistry. To be graduated with the designation "Honors in Chemistry," a student must complete satisfactorily Chemistry 391, 392 or an independent study project approved by the department and an examination covering primarily the independent study project. For additional information members of the departmental faculty should be consulted.

Prospective majors are urged to take Chemistry 111, 112 or 113, 114 in the freshman year. For B.S. majors the following schedule of chemistry and closely related courses is recommended:

<i>Freshman</i>	<i>Sophomore</i>	<i>Junior</i>	<i>Senior</i>
Chemistry 111, 112	Chemistry 221, 222	Chemistry 341, 342	Chemistry 361
Mathematics 111, 112	Mathematics 113, 121	Chemistry 334	Chemistry 371
	Physics 121, 122	Physics 161, 162	Chemistry 391 or 392
		Mathematics 251	

111, 112. College Chemistry. (5, 5) Fundamental chemical principles. Laboratory covers experimental aspects of basic concepts. Lab—three hours.

113, 114. College Chemistry — Honors. (5, 5). Covers the same range of material as 111-112 but is designed for students with a superior background in chemistry. A student may not receive credit for both 111 and 113 or both 112 and 114. Lab—3 hours. P—Permission of instructor.

118. Principles of Chemistry. (5) Fundamental chemical principles, with emphasis on structural concepts. Laboratory work on experimental aspects of basic concepts. Lab—four hours. P—Chemistry 111 or permission of instructor.

221, 222. Organic Chemistry. (5, 5) Principles and reactions of organic chemistry. Lab—four hours. P—Chemistry 112 or 118.

231. Quantitative Analysis. (4) Principles and methods of quantitative analysis. P—Chemistry 112. Lecture—two hours, Lab—four hours. *Offered fall and spring.*

301, 302. Elective Research. (0,0). P—Permission of instructor. *Summers only.*

323. Organic Analysis. (5) The systematic identification of organic compounds. Lab—four hours. P—Chemistry 222.

324. Chemical Synthesis. (2 or 4) A library, conference, and laboratory course. Lab—four or eight hours. P—Chemistry 222.

334. Chemical Analysis. (5) Theoretical and practical applications of modern methods of chemical analysis. Lab—four hours. C—Chemistry 341.

341, 342. Physical Chemistry. (5, 5) Fundamentals of physical chemistry. Lab—four hours. P—Chemistry 112 or 118, Mathematics 111, Physics 111, 112, or 121, 122.

361. Inorganic Chemistry. (5) Principles and reactions of inorganic chemistry. Lab—four hours. P—Chemistry 341.

362. Inorganic Chemistry. (4) Continuation of principles of inorganic chemistry with practical applications to inorganic systems. P—Chemistry 361.

371. Introductory Quantum Chemistry. (4) Introduction to the quantum theory and its application to chemical systems. P—Chemistry 342 or permission of instructor.

381, 382. Chemistry Seminar. (0, 0) Discussions of contemporary research. Attendance required of B.S. chemistry majors in the junior and senior years.

391, 392. Undergraduate Research. (2, 2) Undergraduate research. Lab—six hours.

Classical Languages

Robert W. Ulery Jr., Chairman

Professor Carl V. Harris

Associate Professors John L. Andronica, Robert W. Ulery Jr.

Visiting Assistant Professor Bruce D. MacQueen

The Department of Classical Languages offers three majors: Greek, Latin, and classical studies. Minors are offered in Greek and in Latin.

A major in Greek requires forty credits in the department. Thirty-two of these credits must be in the Greek language. Classics 270 is also a requirement.

A minor in Greek requires twenty-five credits: Greek 111-112, 153, 211, and either 212 or 231; and Classics 270.

For those who begin Latin with Latin 111 or 113, a major requires thirty-six credits in the department beyond the elementary level (111, 112 or 113). Twenty-eight of these credits must be in the Latin language. For those who begin in the College with Latin 153, a major requires thirty-six credits in the department. Twenty-eight of these credits must be in the Latin language. For those who begin with a 200-level course in the College, a major requires thirty-two credits in the department. Twenty-four of these credits must be in the Latin language.

A minor in Latin requires three 200-level courses in Latin: Classics 271; and one additional course (three or four credits) in Greek or Latin or classics.

A major in classical studies requires fifty-six credits. A minimum of thirty-six credits of course work must be taken in the department. A maximum of forty-eight credits in the department may be exceeded only if a student undertakes course work in both Latin and Greek. The student must take a minimum of two courses at the 200-level in either Greek or Latin and the following: Art 241 (*Ancient Art*), Classics 265 (*Greek Literature*), Classics 272 (*Latin Literature*), Classics 270 (*Greek Civilization*), and Classics 271 (*Roman Civilization*).

A maximum of sixteen credits may be taken in the following: Art 227 (*Art of the Ancient Near East*), 252 (*Medieval Art*), 242 (*Minoan and Mycenaean Art*), 244 (*Greek Art*), 245 (*Roman Art*), 246 (*Greek and Roman Architecture*); History 215, 216 (*The Ancient World*); Philosophy 201 (*Ancient and Medieval Philosophy*), 230 (*Plato*), 231 (*Aristotle*); Religion 317 (*The Ancient Near East*), 363 (*Hellenistic Religions*); Hebrew 111, 112, 153, 211. Other courses may be allowed with the permission of the department.

The requirements for certification to teach Latin in high school are the same as the requirements for a major in Latin. A major in classical studies serves as an appropriate part of the program of studies required for certification to teach Latin in high school. A student wishing to secure this certification should confer with the chairman of the department.

Highly qualified majors are invited by the department to apply for admission to the honors program in Latin, Greek, or classical studies. To be graduated with the designation "Honors in Latin," "Honors in Greek," or "Honors in Classical Studies," a student must complete an honors research project and pass a comprehensive oral examination. For honors in Latin or Greek, at least two of the courses counted toward the major must be seminar courses; for honors in classical studies, at least one seminar course in Latin or Greek is required. For additional information members of the departmental faculty should be consulted.

Greek

111, 112. Elementary Greek. (5, 5) Greek grammar; selections from Greek prose writers and poets.

153. Intermediate Greek. (4) Grammar and Xenophon's *Anabasis*. Thorough drill in syntax.

211. Plato. (4) Selections from the dialogues of Plato.

212. Homer. (4) Selections from the *Iliad* and the *Odyssey*.

221, 222. Selected Readings. (3, 3) Intensive reading courses designed to meet individual needs and interests.

231. The Greek New Testament. (4) Selections from the Greek New Testament.

241. Greek Tragedy. (3) Euripides' *Medea*. This course includes a study of the origin and history of Greek tragedy, with collateral reading of selected tragedies in translation. Seminar.

242. Greek Comedy. (3) Aristophanes' *Clouds*. This course includes a study of the origin and history of Greek comedy, with collateral reading of selected comedies in translation. Seminar.

291, 292. Honors in Greek. (2, 2) Directed research for honors paper.

Latin

111, 112. Elementary Latin. (4, 4) Introduction to Latin grammar.

113. Elementary Latin. (5) Introduction to Latin grammar. Covers material of Latin 111 and 112 in one semester. Not open to students who have had Latin 111 or 112.

153. Intermediate Latin. (5) Grammar review and selected readings.

211. Vergil. (4) Intensive readings from the *Aeneid*, with emphasis on literary values.

212. Roman Historians. (4) A reading of the works of Sallust and Livy, with attention to historical milieu and the norms of ancient historiography.

- 216. Roman Lyric Poetry.** (4) An interpretation and evaluation of lyric poetry through readings from a wide variety of the poems of Catullus and Horace.
- 221. Tacitus.** (4) A reading and critical analysis of the works of Tacitus.
- 225. Roman Epistolography.** (4) Selected readings from the correspondence of Cicero and Pliny the Younger and the literary epistles of Horace and Ovid.
- 226. Roman Comedy.** (4) Reading of selected comedies of Plautus and Terence, with a study of literary values and dramatic techniques.
- 241. Satire I.** (3) Selected readings from Lucilius, Horace, and Juvenal. Attention given to the origin and development of the genre. Seminar.
- 242. Satire II.** (3) Readings from Petronius and the *Ludus de Morte Claudii*. Seminar.
- 243. Latin Readings.** (3) A course designed to meet individual needs and interests.
- 250. Prose Composition.** (2)
- 261. Lucretius.** (3) Readings from the *De Rerum Natura*, with attention to literary values and philosophical import. Seminar.
- 262. Cicero.** (3) Readings from Cicero's philosophical essays, with a survey of Greek philosophical antecedents.
- 265. The Elegiac Poets.** (3) Readings of Tibullus, Propertius, and Ovid, with study of the elegiac tradition. Seminar.
- 291, 292. Honors in Latin.** (2, 2) Directed research for honors paper.

Classics

- 220. Greek and Latin in Current Use.** (3) A systematic study of Greek and Latin loan words, roots, prefixes, and suffixes as elements of English and specialized vocabularies (e.g., scientific and legal). A knowledge of the Greek and Latin languages is *not* required.
- 251. Classical Mythology.** (4) A study of the most important myths of the Greeks and Romans. Many of the myths are studied in their literary context. A knowledge of the Greek and Latin languages is *not* required.
- 252. Women in Antiquity.** (3, 4) The course explores the place of women in Greek and Roman society, men's views of them, their views of themselves, and their contribution to society, through primary source readings from the ancient authors. A knowledge of the Greek and Latin languages is *not* required.
- 253. Greek Epic Poetry.** (4) Oral epic poetry, with primary emphasis on the *Iliad* and the *Odyssey* of Homer and the later development of the genre. A knowledge of the Greek language is *not* required.
- 254. Roman Epic Poetry.** (4) A study of the Latin treatment and development of the literary form, with emphasis on Lucretius, Vergil, Ovid, and Lucan. A knowledge of the Latin language is *not* required.
- 263. Tragic Drama.** (4) A study of the origins and development of Greek tragedy and

s influence on Roman writers, with readings from Aeschylus, Sophocles, and Euripides. A knowledge of the Greek and Latin languages is *not* required.

64. Greek and Roman Comedy. (4) Representative works of Aristophanes, Menander, Plautus, and Terence, with attention to the origins and development of comedy. A knowledge of the Greek and Latin languages is *not* required.

65. A Survey of Greek Literature. (4) A study of selections from Greek literature in English translation. A knowledge of the Greek language is *not* required.

70. Greek Civilization. (3) Lectures and collateral reading upon those phases of Greek civilization which have particular significance for the modern world. A knowledge of the Greek language is *not* required.

71. Roman Civilization. (3) Lectures and collateral reading upon the general subject of Rome's contribution to the modern world. A knowledge of the Latin language is *not* required.

72. A Survey of Latin Literature. (4) A study of selections from Latin literature in English translation. A knowledge of the Latin language is *not* required.

88. Individual Study. (2-4)

91, 292. Honors in Classical Studies. (2, 2) Directed research for honors paper.



Economics

John C. Moorhouse, Chairman
Professors John C. Moorhouse, J. Van Wagstaff
Associate Professor Donald E. Frey
Assistant Professors J. Daniel Hammond,
Richard P. Hydell, Michael L. Wyzan
Instructor Claire H. Hammond

The objectives of the economics program are to help prepare students for effective participation in the decision-making processes of society, to develop analytical skill in solving economic problems, to promote a better understanding of alternative economic systems, and to provide a balanced curriculum to prepare students for graduate study or positions in industry and government.

The major in economics requires a minimum of thirty-six credits in economics including Economics 151, 152, 201, and 202.* In order to major in Economics, a student must have earned a minimum of a C in each of Economics 151 and Economics 152. The department recommends that majors take Mathematics 111 and 157 either to fulfill the Division II requirement or as electives. A student may offer up to five credits toward the thirty-six credits required for a major by taking one of the following courses, provided that, for (c), (d), or (e), the complementary course in economics is successfully completed.

- (a) Mathematics 112. Second semester of Calculus. (5)
- (b) Philosophy 279. Philosophy of Science. (4)
- (c) Politics 210. Policy Analysis. (4) (Economics 221. Public Finance)
- (d) History 344. Modern China. (4) (Economics 255. Comparative Economic Systems)
- (e) History 332. Russia. (4) (Economics 255. Comparative Economics Systems)

The remaining courses for a major in economics and courses in related fields are selected by the student and the adviser. A minimum grade average of C on all courses attempted in economics is required for graduation.

Highly qualified majors are invited by the department to apply for admission to the honors program in economics. To be graduated with the designation "Honors in Economics," they must complete a satisfactory economics research project, pass comprehensive oral examination on the project, and complete Economics 281 or 288 and Economics 288. For additional information members of the departmental faculty should be consulted.

The Departments of Mathematics and Economics offer a joint major leading to Bachelor of Science degree in mathematical economics. This interdisciplinary program, consisting of no more than fifty-six credits, affords the student an opportunity to apply mathematical methods to the development of economic theory, models, and

**Economics 111 satisfies the requirement for Economics 151 and 152 by permission of the department.*

quantitative analysis. The major consists of the following course requirements: Mathematics 111, 112, 113, 121, 251; Economics 151, 152, 201, 202, 203; a joint seminar in mathematical economics; and three additional courses chosen with approval of the program advisers. Students electing the joint major must receive permission from both the Department of Economics and the Department of Mathematics.

Highly qualified majors may be invited to apply for admission to the honors program in the joint major. To be graduated with the designation "Honors in Mathematical Economics," they must complete a senior research paper and pass a comprehensive oral examination on the project. For additional information members of the department faculty should be consulted.

11. Introduction to Economic Analysis. (4) A survey of the discipline for students who wish to take only one course in economics. Elementary supply and demand analysis is considered, in addition to more general topics involving the formation of national economic policy. (Credit is not granted for this course and Economics 151 or 152.)

51. Principles of Economics. (4) A study of individual economic units in a market economy, with some attention to monopoly, labor unions, and poverty.

52. Principles of Economics. (4) Attention is focused on the functioning of the economy as a whole, with particular reference to employment, inflation, economic growth, and policy. P—Economics 151.

88. Individual Study. (4) Directed readings in a specialized area of economics. —Permission of the instructor.

01. Microeconomic Theory. (4) Develops the theory of consumer behavior and the theory of the firm, with emphasis on price and output determination under various market conditions. P—Economics 151, 152.



202. Macroeconomic Theory. (4) A study of Keynesian and post-Keynesian theories about the determination of the level of national income, employment, and economic growth. P—Economics 151, 152.

203. Introduction to Econometrics. (5) Economic analysis through quantitative methods, with emphasis on model construction and empirical research. P—Economics 151, 152; and Mathematics 157, or 121.

204. Economic Indicators. (2) The theory, construction, and interpretation of significant quantitative indicators of economic behavior, such as the unemployment rate and the various price indices. P—Economics 151, 152.

205. Seminar in Mathematical Economics. (4) Calculus and matrix methods used to develop basic tools of economic analysis. P—Mathematics 111, 112 and Economics 201.

221. Public Finance. (4) An examination of the economic behavior of government. Includes principles of taxation, spending, borrowing, and debt-management. P—Economics 151, 152.

222. Monetary Theory and Policy. (4) A rigorous development of the theory of supply and demand for money, plus the interrelationship among prices, interest rates, and aggregate output. P—Economics 151, 152.

224. Law and Economics. (4) An economic analysis of property, contracts, torts, criminal behavior, due process, and law enforcement. P—Economics 151, 152.

225. Public Choice. (4) Traditional tools of economic analysis are employed to explore such topics in political science as political organization, elections, coalition formation, the optimal provision of public goods, and the scope of government. P—Economics 151, 152.

242. Labor Economics. (4) Economic analysis of wages and hours, employment, wage and job discrimination, investment in education, and unions. P—Economics 151, 152.

244. Industrial Organization. (4) An analysis of market structure, with particular reference to organization practices, price formation, efficiency, and public regulation. P—Economics 151, 152.

248. Resource Economics. (4) The economic theory of natural resource allocation and environmental quality. P—Economics 201.

251. International Economics. (4) A study of international trade theory, balance of payments, foreign exchange, trade restrictions, and commercial policies. P—Economics 201.

252. Economic Growth and Development. (4) A study of the problems of economic growth, with particular attention to the less developed countries of the world. P—Economics 151, 152.

255. Comparative Economic Systems. (4) An examination of several major non-capitalist economies, with special reference to the Soviet Union, Yugoslavia, and the People's Republic of China. P—Economics 151, 152.

- 56. Urban Economics.** (4) Application of economic theory to suburbanization, land values, urban decay, zoning, location decisions of firms and households, and metropolitan fiscal problems. P—Economics 151, 152.
- 51. American Economic Development.** (4) The application of economic theory to historical problems and issues in the American economy. P—Economics 151, 152.
- 52. History of Economic Thought.** (4) An historical survey of the main developments in economic thought from the Biblical period to the twentieth century. —Economics 151, 152.
- 71, 272. Selected Areas in Economics.** (4, 4) A survey of an important area in economics not included in the regular course offerings. The economics of housing, education, technology, and health services are examples. Students should consult with instructor to ascertain topic before enrolling. P—Economics 151, 152.
- 75. Economic Philosophers.** (4) An in-depth study of the doctrines and influence of three major figures in economics, such as Smith, Marx, and Keynes. P—Economics 151, 202.
- 51. Seminar in Economic Theory and Policy: Micro.** (4) Microeconomic analysis of contemporary issues, with emphasis on contributions to policy. P—Permission of instructor.
- 52. Seminar in Economic Theory and Policy: Macro.** (4) A consideration of recent developments in macroeconomic theory with a discussion of their implications for policy. P—Permission of instructor.
- 58. Economic Research.** (4) Development and defense of a senior research project. Required of candidates for departmental honors. P—Permission of department.

Education

Joseph O. Milner, Chairman

**Professors Thomas M. Elmore, John E. Parker Jr., Herman J. Preseren,
J. Don Reeves**

Associate Professors John H. Litcher, Joseph O. Milner

Assistant Professors Patricia M. Cunningham, Linda Nielsen,

Leonard P. Roberge

Visiting Lecturers Joseph Dodson, Donald L. Ellis,

Richard I. Tirrell

Instructor Gay S. Pitts

Because Wake Forest University believes that the educational profession is important to society and that the welfare of mankind is significantly affected by the quality of its educational leadership, one of the important objectives of the University has been and continues to be the preparation of teachers and other professional school personnel. The University's commitment to quality in teacher education is demonstrated by selective admission to the program, a wide range of professional courses, and closely supervised internships appropriate to the professional needs of students. Prospective teachers either major in other academic areas and take education

courses to earn secondary certification or earn intermediate, science, or social studies certification as majors in the Department of Education. Certification for the primary grades can also be earned by intermediate majors who wish to extend their range of teaching certification. In addition to the professional program, the department provides a non-professional minor and elective courses open to all students.

Teacher Certification. The North Carolina State Department of Public Instruction issues the Professional Class A Teacher's Certificate to graduates who have completed an approved program, including the specified courses in their teaching field(s) and the prescribed courses in education, who have demonstrated specific competencies, and who receive recommendations from the designated official(s) in their teaching area(s) and from the chairman of the department or a deputy.

Special students (those not having completed prior to graduation an approved certification program from this or another institution) are required to secure from the department an analysis of their deficiencies and a plan for completing the Class A Certificate. Information about certification requirements for other states can be secured from the department as assistance in planning a program to meet the certification requirements of those states.

Admission Requirements. Admission to the teacher education program normally occurs during the sophomore year. Admission involves filing an official application with the department, being screened by faculty committees, and being officially approved by the department.

Course Requirements. The approved program of teacher education requires candidates to complete successfully a series of professional education courses. The exact sequence of professional and academic courses varies with a student's particular program and is determined in conference with the candidate. For those seeking secondary certification the majority of the professional work is taken during one semester of the senior year. Candidates for the intermediate certificate may begin course work required for certification as early as the sophomore year. A cooperative agreement with Salem College gives education majors the additional opportunity to be certified in learning disabilities.

Student Teaching. Prerequisites for registering for student teaching include (1) senior, graduate, or special student classification; (2) completion of school practice and foundations of education courses; (3) an average of at least C on all course work; (4) an average of at least C on all courses taken in the area(s) of certification; and departmental approval for admission to the teacher education program.

Students are assigned to student teaching opportunities by public school officials on the basis of available positions and the professional needs of the student and the public school system. (The University does not assume the responsibility for transportation to schools during student teaching.) For both secondary and intermediate students one semester of the senior year is reserved for the student teaching experience and the block of courses preparatory to that experience in the schools. Students may not take other courses during this semester without the approval of the Director of Teacher Education.

Teaching Area Requirements

English—Thirty-six credits, including four credits from courses numbered 160–175; at least sixteen credits from courses numbered 300–399; 323; 390.

French—Thirty-six credits, including French 153, 216 or 217, 219, 221, 224, or their equivalents; at least eight credits in French literature beyond 217.

Spanish—Thirty-six credits, including Spanish 153, 215 or 216, 217, 221, 223, 224, or their equivalents; eight credits from 225, 226, 227; at least four additional credits in literature.

French and Spanish—Fifty-six credits, including French 153x, 216, 217, 221, 222, and 224, plus Spanish 153x; either 215 or 216; 219; 221; either 223 or 224; and eight credits from 225, 226, 227, or their equivalents.

German—Thirty-two credits, including German 153, 211, 212; eight credits from German 217, 218, 219, 220; at least twelve credits in German literature beyond 212.

Latin—The requirements are the same as those for the major in Latin.

Intermediate Education—Forty-two credits, including appropriate basic and divisional course requirements; eight credits in language arts; eight credits in social studies; eight credits in science; eight credits in mathematics; four credits in music; four credits in humanities; two credits in physical education. Remaining certification requirements are obtained through intermediate education courses and an academic concentration in one of the teaching areas of the intermediate grades.

Mathematics—Forty credits, including Mathematics 111, 112, 113, 121, 221, 231, 332; at least eight credits from other 300-level courses.

Music—Forty-eight credits, including Music 171, 172, 173, 174, 181, 182, 186, 187, 188; Education 280, 282, 284, 289, and 291.

Physical Education and Health—Forty-three credits, including Physical Education 220, 221, 222, 224, 230, 240, 250, 353, 357, 360, 363; Biology 111 and 150.

Science—Ten credits each in biology, chemistry, and physics; eight credits in mathematics; additional work in the area of concentration: biology (twenty credits), chemistry (twenty credits), or physics (seventeen credits). For certification in the individual fields of science, the following are required: biology (thirty credits), chemistry (thirty credits), or physics (twenty-seven credits).

Social Studies—Forty-eight credits, including twenty-four credits in history, with at least six to eight credits in United States history and six to eight credits in world (European) history; twenty credits from politics, sociology, anthropology, or economics, with no more than eight credits in any one area; and four credits in geography. For certification in the individual fields of the social studies, the following are required: economics (twenty-four credits), politics (twenty-four credits), history (twenty-four credits, with at least six to eight credits in United States history and six to eight credits in world [European] history), and sociology (twenty-four credits).

Speech Communication—Forty-four credits, including Speech Communication 121, 122 or 152, 153, 155 or 376, 161, 231, 252 or S355, 261, and 241 or 245 or 283, 284, and two 300-level speech communication electives.

Dramatic Arts—Forty to forty-two credits, including Speech Communication 121, 151, 152, 231, 226, 227, 283, 284, 332 or S324, and 327 or 328; English 329 or 323 or 369; Physical Education 162.

Speech and Theatre—Fifty credits, including Speech Communication 121 or 241 or 245, 151 or 152, 153, 155, or 376, 161 or 227, 231, 223, 226, 252 or S355, 261, 284, 321, 322.

Education courses required for a secondary or special subject certificate are Education 201 or 301 or 304, 202 or 203, 211, 214, 251, 291 and 383. Education courses required for an intermediate certificate are Education 201 or 301 or 304, 202 or 203, 211, 221, 222, 251, 271, 293, 295, 296, 313, and 383. A minor in education studies requires Education 201, 211, 303, 304, 313, and Education 393 or 214. A minor in professional education requires Education 201 or 301 or 304, 202, or 203, 211, 214, 251, 291, and 383.

201. Foundations of Education. (4) Philosophical, historical, and sociological foundations of education, including analysis of contemporary issues and problems.

202 or 203. School Practicum. (2) Assigned experiences in elementary and secondary schools. Weekly seminar. Pass/Fail only.

211. Educational Psychology. (4) The theories, processes, and conditions of effective teaching/learning. P—Education 201 or permission of instructor.

214. The School and Teaching. (4) Organization of the school system; bases of education; the curriculum; major problems of education and teaching; the role of the teacher; psychological aspects of teaching. P—Education 201 and permission of instructor.

221. Children's Literature and Reading. (4) A survey of the types of literature appropriate for the intermediate grades and an investigation of the basic problems of reading.

222. The Arts in the Intermediate Grades. (4) The development of skills in music and fine arts appropriate to the intermediate grades.

223. Health and Physical Education for the Intermediate Grades. (4) The development of physical education skills appropriate for the intermediate grade teacher and an understanding of the personal and community health needs appropriate for the grade level.

251. Student Teaching. (6) Observation and experience in school-related activities. Supervised student teaching. Pass/Fail only. P—Education 201 and permission of instructor.

252. Student Teaching. (2) Observation and experience in the Primary Grades K–5. Pass/Fail. P—Permission of instructor.

271. Introduction to Geography. (4) A study of the physical environment and its relationship to man, including an examination of climate, soils, water resources, and land forms found in various regions throughout the world.

272. Geography Study Tour. A guided tour of selected areas to study physical, economic, and cultural environments and their influence on man. Background references for reading are suggested prior to the tour.

- 280. Orchestration.** (4) A study of the orchestral and wind band instruments, how composers have used them throughout history, and the development of practical scoring and manuscript skills. *Offered in alternate years.* P—Music 174, 184.
- 282. Conducting.** (4) A study of choral and instrumental conducting techniques, including practical experience with ensembles. *Offered in alternate years.* P—Music 174, 184.
- 284. Music Literature Seminar.** (3 or 4) A survey of repertoire, including an examination of teaching materials in the student's special area of interest. P—Music 174, 184 and permission of instructor.
- 289. Ensemble Methods.** (2) A practical study of choral and instrumental techniques. Discussion of tonal development, administration, bibliography, choral and instrumental repertoire, marching band, and instrumental problems. P—Music 101 or 102 or permission of instructor.
- 291. Methods and Materials.** (4) Methods, materials, and techniques used in teaching the various subjects. P—Education 201 and permission of instructor.
Teaching of English. Fall.
Teaching of Foreign Language. Spring.
Teaching of Mathematics. Spring.
Teaching of Music. Fall.
Teaching of Physical Education and Health. Spring.
Teaching of Science. Fall.
Teaching of Social Studies. Fall.
Teaching of Speech Communication. Spring.
Teaching of Theatre Arts. Fall.
- 292. Primary Methods.** (4) Classroom organization, teaching strategies, and materials appropriate to subjects taught in grades K–3. P—Permission of instructor.
- 293. Intermediate School Curriculum: Theory and Practice.** (3) General principles of curriculum construction and teaching methods. Introduction to the use of audiovisual materials and equipment.
- 295. Methods and Materials for Teaching Language Arts and Social Studies.** (4) A survey of the basic materials, methods, and techniques of teaching the language arts and social studies in the intermediate grades. P—Permission of instructor.
- 296. Methods and Materials for Teaching Science and Mathematics.** (4) A survey of the basic materials, methods, and techniques of teaching science and mathematics in the intermediate grades. P—Permission of instructor.
- 301. Audiovisual Education.** (4) Introduction to the field of audiovisual education; development and application of skills in the use of instructional materials, equipment, and programs.
- 302. Production of Instructional Materials.** (4) Methods of producing instructional materials and other technological techniques. P—Education 301.
- 303. History of Western Education.** (4) Educational theory and practice from ancient times through the modern period, including American education.

304. Theories of Education. (4) Contemporary proposals for educational theory and practice studied in the context of social issues.

306. Studies in the History and Philosophy of Education. (4) A study of selected historical eras, influential thinkers, or crucial problems in education. Topics announced annually.

313. Human Growth and Development. (4) A study of the intellectual, emotional and physical components of growth from birth to adolescence, with special concern for the educational implications of this process.

323. Educational Statistics. (4) Descriptive, inferential, and nonparametric statistical procedures involved in educational research. Not open to students who have taken Psychology 211 and 212. P—Permission of instructor.

341. Principles of Counseling and Guidance. (4) Counseling history, philosophy theory, procedure, and process. Therapeutic and developmental counseling; approaches in guidance and personnel work in education, business, and community service agencies.

383. Reading in the Content Areas. (2) The course provides an introduction to teaching the basic reading skills at the intermediate and secondary level; vocabulary comprehension, reading rate, selection of texts, and critical and interpretive reading. Particularly stressed are diagnoses of reading problems and techniques for correcting these problems in specific subject content areas.

390. Education of Exceptional Persons. (4) A survey of the types of exceptionality. Emphasis will be placed on characteristics, identification, educational programming management, and evaluation.

391. Teaching the Gifted. (4) An investigation of theory and practice pertinent to teachers of the gifted.

392. The Psychology of the Gifted Child. (4) A discussion of giftedness and creativity in children and the relationship of those characteristics to adult superior performance. Topics to be covered include a history of the study of precocity, methods and problems of identification, the relationship of giftedness and creativity, personality characteristics and social-emotional problems of gifted children, and the social implications of studying giftedness.

393. Individual Study. (2, 4) A project in an area of study not otherwise available in the Department of Education. Permitted upon departmental approval of petition presented by a qualified student.

394. Internship in Education of the Gifted. (4) An intensive period of observation and instruction of gifted students. Readings and directed reflection upon the classroom experience will be used to develop a richer understanding of such a special school setting.

English

Robert N. Shorter, Chairman

**Professors John A. Carter Jr., Doyle R. Fosso, Thomas F. Gossett,
Alonzo W. Kenion, Elizabeth Phillips, Lee Harris Potter, Robert N. Shorter,
Edwin Graves Wilson**

**Associate Professors Nancy J. Cotton, Andrew V. Ettin, W. Dillon Johnston,
Robert W. Lovett, William M. Moss, Blanche C. Speer**

Visiting Assistant Professors David G. Brailow, Gillian R. Overing,

Lecturers Dolly A. McPherson, Bynum Shaw

Visiting Lecturer Robert A. Hedin

**Instructors Cynthia L. Caywood, Patricia A. Johansson, Barry G. Maine,
Mark R. Reynolds**

The major in English requires a minimum of forty credits, at least thirty-two of which must be in advanced language and literature courses numbered 300 to 399. These courses must include Shakespeare, two additional courses in British literature before 1800, one course in American literature, and, early in the major, one seminar. Majors and their advisers plan individual programs to meet these requirements and to include work in the major literary types.

A minor in English requires English 160 or 165 and English 170 or 175, plus five advanced courses in language and literature. Each minor will be assigned an adviser in the English Department who will plan with the student a program of study.

The prerequisite for all 300-level courses in English is any one of the courses in British and American literature numbered 160, 165, 170, and 175, all of which are offered each semester. Additional courses in journalism and writing are offered by the department as related subjects but do not count toward an English major; they may be taken as electives regardless of the field of study in which a student majors.

Highly qualified majors are invited by the department to apply in the second semester of their junior year for admission to the honors program in English. To graduate with "Honors in English," students must have a minimum grade point average of 3.5 in the major and 3.0 in all course work and must satisfy the requirements for English 388 during their senior year. Interested students may consult departmental faculty members for further information.

Lower Division Courses

I. Composition Review. (0) A tutorial in the essentials of standard usage and the basic principles of composition.

105. English Fundamentals. (2) Training in the fundamentals of written English. Satisfactory completion required for entry into English 110. Admission by placement only; does not satisfy the basic composition requirement.

- *110. English Composition.** (4) Training in expository writing; frequent essays based upon readings.
- *112. English Composition and Literature.** (4) Training in expository writing based on the reading of literature. P—Permission of department.
- 160. Survey of Major British Writers.** (4) Eight to ten writers representing different periods and genres; primarily lecture.
- 165. Studies in Major British Writers.** (4) Three to five writers representing different periods; primarily discussion, with frequent short papers. Limited enrollment.
- 170. Survey of Major American Writers.** (4) Nine to eleven writers representing different periods and genres; primarily lecture.
- 175. Studies in Major American Writers.** (4) Three to five writers representing different periods; primarily discussion, with frequent short papers. Limited enrollment.
- 180. Traditions of Humanity: The Liberal Arts.** (2) A study of major concepts of liberal education in the Western world.
- 210. Advanced Composition.** (4) Study of prose models of exposition; frequent papers and individual conferences. Enrollment limited.
- 225. Reading Short Fiction.** (2) Selected readings from the genre of short fiction designed to increase students' appreciation and pleasure.
- 226. Reading the Novel.** (2) Selected readings from the genre of the novel designed to increase students' appreciation and pleasure.
- 227. Reading Poetry.** (2) Selected readings from the genre of poetry designed to increase students' appreciation and pleasure.
- 228. Reading Drama.** (2) Selected readings from the genre of drama designed to increase students' appreciation and pleasure.
- 245. Literary Approaches to Film.** (2) The study of film as a literary genre, with special attention given to narrative, theme, and structure. Students will apply methods and principles of literary criticism to selected films.
- 299. Individual Study.** (2–4) A course of independent study with faculty guidance. By prearrangement.

Journalism Courses

- 270. Introduction to Journalism.** (4) Survey of the fundamental principles of news-gathering and news-writing; study of news and news values, with some attention to representative newspapers.
- 272. Editing.** (4) A laboratory course in copy-editing, headline-writing, typography and make-up; practice on Video Display Terminal. P—English 270.

**Either 110 or 112 is a prerequisite for all other courses in English unless the basic requirement is waived. Either course fulfills the basic course requirement.*

276. Advanced Journalism. (4) Intensive practice in writing various types of newspaper stories, including the feature article. Limited to students planning careers in journalism. P—English 270.

278. History of Journalism. (4) A study of the development of American journalism and its English origins; detailed investigations of representative world newspapers.

284. The Essay. (2) Primarily for those interested in writing for publication, with concentration on writing various types of essays.

Writing Courses

285. Poetry Workshop. (2) A laboratory course in the writing of verse. Study of poetic techniques and forms as well as works of contemporary poets. Frequent individual conferences.

286. Short Story Workshop. (2) A study of the fundamental principles of short fiction writing; practice in writing; extensive study of short story form. P—Permission of instructor.

383, 384. Theory and Practice of Verse Writing. (4, 4) Emphasis on reading and discussing student poems in terms of craftsmanship and general principles.

Advanced Language and Literature Courses

300. Seminar in the Major. (4) Selected topics in British and American literature. Intensive practice in critical discourse, including discussion, oral reports, and short essays. Introduction to literary scholarship and research methodology leading to a documented paper. Required for all majors.

301. Individual Authors. (2) Study of selected work from an important American or British author.

302. Ideas in Literature. (2) Study of a significant literary theme in selected works.

304. History of the English Language. (4) A survey of the development of English syntax, morphology, and phonology from Old English to the present, with attention to vocabulary growth.

311. The Legend of Arthur. (4) The origin and development of the Arthurian legend in France and England, with emphasis on the works of Chretien de Troyes and Sir Thomas Malory.

315. Chaucer. (3 or 4) Emphasis on *The Canterbury Tales* and *Troilus and Criseyde*, with some attention to minor poems. Consideration of literary, social, religious, and philosophical background.

320. British Drama to 1642. (4) British drama from its beginning to 1642, exclusive of Shakespeare. Representative cycle plays, moralities, Elizabethan and Jacobean tragedies, comedies, and tragicomedies.

323. Shakespeare. (4) Thirteen representative plays illustrating Shakespeare's development as a poet and dramatist.

325. Sixteenth Century British Literature. (4) Concentration on the poetry of Spenser, Sidney, Shakespeare, Wyatt, and Drayton, with particular attention to sonnets and *The Faerie Queene*.

327. Milton. (4) The poetry and selected prose of John Milton, with emphasis on *Paradise Lost*.

328. Seventeenth Century British Literature. (4) Poetry of Donne, Herbert Vaughan, Marvel, Crashaw, prose of Bacon, Burton, Browne, Walton. Consideration of religious, political, and scientific backgrounds.

330. British Literature of the Eighteenth Century. (4) Representative poetry and prose, exclusive of the novel, 1700–1800, drawn from Addison, Steele, Defoe, Swift, Pope, Johnson, and Boswell. Consideration of cultural backgrounds and significant literary trends.

332. Satire. (4) The nature of the satiric form and the satiric spirit as revealed through reading and critical analysis of significant examples, mostly British and American.

335. Eighteenth Century British Fiction. (4) Primarily the fiction of Defoe, Richardson, Fielding, Smollett, Sterne, and Austen.

336. Restoration and Eighteenth Century British Drama. (4) British drama from 1660 to 1780, including representative plays by Dryden, Etherege, Wycherley, Congreve, Goldsmith, and Sheridan.

338. British Literature of the Late Eighteenth Century. (4) A study of the period's interest in the exotic, the gothic, the oriental, and the medieval. Authors include Goldsmith, Burns, Walpole, and Burke.

350. British Romantic Poets. (4) A review of the beginnings of Romanticism in British literature, followed by study of Wordsworth, Coleridge, Byron, Keats, and Shelley; collateral reading in the prose of the period.

353. Nineteenth Century British Fiction. (4) Representative major works by Dickens, Eliot, Thackeray, Hardy, the Brontës, and others.

354. Victorian Poetry. (4) A study of Tennyson, Browning, Hopkins, and Arnold or another Victorian poet.

360. Studies in Victorian Literature. (4) Selected topics, such as development of genres, major texts, and cultural influences. Readings in poetry, fiction, autobiography, and other prose.

362. Blake, Yeats, and Thomas. (3 or 4) Reading and critical analysis of the poetry of Blake, Yeats, and Dylan Thomas; study of the plays of Yeats and his contemporaries in the Irish Renaissance, especially Synge and Lady Gregory.

364. Studies in Literary Criticism. (4) Consideration of certain figures and schools of thought significant in the history of literary criticism.

365. Twentieth Century British Fiction. (4) A study of Conrad, Lawrence, Joyce, Forster, Woolf, and later British writers, with attention to their social and intellectual backgrounds.

- 367. Twentieth Century Poetry.** (4) Selected American and British poets from 1900 to 1965.
- 368. Studies in Irish Literature.** (4) Critical readings of the works of major Irish writers within the context of the political, social, and literary history of Ireland.
- 369. Modern Drama.** (4) Main currents in modern drama from nineteenth century naturalism and symbolism through expressionism and absurdism, including representative plays by Shaw, O'Neill, Williams, and Pinter.
- 372. American Romanticism.** (4) Writers of the mid-nineteenth century, including Emerson, Thoreau, Hawthorne, and Melville.
- 376. American Poetry from 1855 to 1900.** (4) Readings from at least two of the following poets: Whitman, Dickinson, Melville.
- 378. Literature of the American South.** (4) A study of Southern literature from its beginnings to the present, with emphasis upon such major writers as Tate, Warren, Faulkner, O'Connor, Welty, and Styron.
- 380. American Fiction from 1865 to 1915.** (4) Such writers as Twain, James, Howells, Crane, Dreiser, Wharton, and Cather.
- 381. Studies in Black American Literature.** (4) Reading and critical analysis of selected fiction, poetry, drama, and other writing by representative black Americans.
- 382. Modern American Fiction, 1915 to the Present.** (4) To include such writers as Lewis, Hemingway, Fitzgerald, Faulkner, Steinbeck, Wolfe, Wright, Katherine Anne Porter, Mailer, Bellow, Malamud, Flannery O'Connor, Baldwin, and Styron.
- 386. Directed Reading** (2-4) A tutorial in an area of study not otherwise provided by the department; granted upon departmental approval of petition presented by a qualified student.
- 388. Honors in English.** (4) A conference course centering upon a special reading requirement and a thesis requirement. For senior students wishing to graduate with "Honors in English."
- 389. The Use of the Library in Literary Research.** (2) Attention to materials, methods, and bibliography for the study of literature.
- 390. The Structure of English.** (4) An introduction to the principles and techniques of modern linguistics applied to contemporary American English.

German

Wilmer D. Sanders, Chairman

Professors Ralph S. Fraser, James C. O'Flaherty, Wilmer D. Sanders

Associate Professors Timothy F. Sellner, Larry E. West

A major in German requires thirty-seven credits beyond German 111, 112. These must include German 218 and should include 281 and 285. A minor in German requires five courses beyond German 152 or 153, one of which must be German 218.

Highly qualified majors are invited by the department to apply for admission to the

honors program in German. To be graduated with the designation "Honors in German," they must complete a senior research project and pass a comprehensive examination. For additional information members of the departmental faculty should be consulted.

There is an exchange program with the Free University of Berlin.

111, 112. Elementary German. (4, 4) This course covers the principles of grammar and pronunciation and includes the reading of simple texts. Lab—one hour.

152. Intermediate German. (4) The principles of grammar are reviewed; reading of selected prose and poetry. Lab—one hour. P—Three years of high school German.

153. Intermediate German. (5) The principles of grammar are reviewed; reading of selected prose and poetry. Lab—one hour. P—German 111, 112.

211, 212. Introduction to German Literature. (4, 4) The object of this course is to acquaint the student with masterpieces of German literature. Parallel reading and reports. P—German 152 or 153.

217. Conversation and Phonetics. (4) A course in spoken German emphasizing facility of expression. Considerable attention is devoted to phonetics. P—German 152, 153, or equivalent.

218. Composition and Grammar Review. (4) A review of the fundamentals of German grammar with intensive practice in translation and composition. Required for majors. P—German 152 or 153 or equivalent.

219. Advanced Composition. (4) A study of advanced grammar and composition. English texts translated into German in addition to free composition in German. P—German 218 or equivalent.

220. German Civilization. (4) A survey of contemporary German culture, including a study of its historical development in broad outline. The course is conducted in German. P—German 217 or permission of instructor.

231. Weimar Germany. (4) Historical and literary examination of Weimar Germany, 1919–1933. Authors include Thomas and Heinrich Mann, Juenger, Hesse, Brecht, Kafka, Tucholsky, Fallada, and Stefan Zweig. German or history credit determined at registration.

249. Old High German and Middle High German Literature. (4) The study of major writers and works from these two areas; emphasizes major writings of the chivalric period. P—German 211, 212, or equivalent.

250. Renaissance, Reformation, and Baroque German Literature. (4) A study of major writers and works from the post-chivalric period to approximately 1700. P—German 211, 212, or equivalent.

253. Eighteenth Century German Literature. (4) A study of major writers and works of the Enlightenment and *Sturm und Drang*. P—German 211, 212, or equivalent.

263. German Literature of the Nineteenth Century I. (4) Poetry, prose, dramas, and critical works from approximately 1795 to 1848. P—German 211, 212, or equivalent.

64. German Literature of the Nineteenth Century II. (4) Readings from the beginnings of Poetic Realism to the advent of Naturalism. P—German 211, 212, or equivalent.

70. Individual Study. (3 or 4) Studies in literature not ordinarily read in other courses. P—German 211, 212, and permission of instructor.

81. Seminar: Twentieth Century Prose. (4) Intensive study of certain works by Thomas Mann, Hesse, and Kafka, plus considerable outside reading. P—German 11, 212, or equivalent.

85. Seminar in Goethe. (4) *Faust*, Part I studied in class. Parallel readings in other works by Goethe assigned. P—German 211, 212, or equivalent.

87, 288. Honors in German. (3, 3) A conference course in German literature. A major research paper is required. Designed for candidates for departmental honors.

History

Richard L. Zuber, Chairman

Professors Richard C. Barnett, Cyclone Covey,

Balkrishna Govind Gokhale, J. Edwin Hendricks, Thomas E. Mullen,

Percival Perry, David L. Smiley, Henry Smith Stroupe, Lowell R. Tillett,

W. Buck Yearns, Richard L. Zuber

Associate Professors James P. Barefield, Merrill G. Berthrong, David W. Hadley, James G. McDowell, Michael L. Sinclair, J. Howell Smith, Alan J. Williams

Lecturer Negley Boyd Harte (London)

Instructor Victor Kamendrowsky

The major in history consists of a minimum of thirty-six credits and must include history 310, from six to eight credits in European history, three or four credits in non-Western history, and from six to eight credits in American history. One of the American history courses must be 151, 152, or 153.

A minor in history requires twenty-four credits.

Highly qualified majors should apply for admission to the honors program in history. To be graduated with the designation "Honors in History," the student must complete satisfactorily History 287 and 288. For additional information members of the departmental faculty should be consulted.

Students contemplating graduate study should take historiography and should acquire a reading knowledge of one modern foreign language (preferably French, German, or Russian) for the M.A. degree and two for the Ph.D. degree.

01. The Rise of the West. (4) A survey of ancient, medieval, and early modern history to 1700.

02. Europe and the World in the Modern Era. (4) A survey of modern Europe from 1700 to the present.

03. European Historical Biography. (2) Study of biographies of men and women who have influenced the history and civilization of Europe.

151, 152. The United States. (4, 4) Political, social, economic, and intellectual aspect 151: before 1865; 152: after 1865. Students who take History 153 may not take either of these courses for credit.

153. The United States. (4) A topical survey combining 151 and 152. Not open to students who take either 151 or 152.

160. Freud. (4) An investigation of Freud's basic ideas in the context of his time. Books to be read include *The Interpretation of Dreams*, *Civilization and Its Discontent*, and Jones' biography in the Trilling abridgement.

211. Colloquium. (1-4).

215, 216. The Ancient World. (4, 3 or 4) Critical focus on the Greeks in the fall and Romans in the spring, but in global context of paleolithic to medieval; psychological and philosophical emphasis.

221. The Middle Ages. (4) A survey of European history, 400-1300, stressing social and cultural developments.

224. The Reformation. (2) Europe in the age of the Reformation.

2260. History of London. (4) Topographical, social, economic, and political history of London from the earliest times. Lectures, student papers and reports, museum visits and lectures, and on-site inspections. *Offered in London.*

2262. The Golden Age of Burgundy. (2) Burgundian society, culture, and government in the reigns of Philip the Bold, John the Fearless, Philip the Good, and Charles the Rash, 1384-1477. *Offered in Dijon.*

2263. Venetian Society and Culture. (4) An examination of Venetian society, including the role within Venetian life of music, theater, the church, and civic ritual.

231. Weimar Germany. (4) Historical and literary examination of Weimar Germany 1919-1933. Authors include Thomas and Heinrich Mann, Juergen Hesse, Brecht, Kafka, Tucholsky, Fallada, and Stefan Zweig. German or historical credit determined at registration.

232. European Historical Novels. (2) Study of the accuracy and value, from the standpoint of the historian, of a selection of historical novels.

238. Twentieth Century Europe. (4) Advent of modernism, World Wars I and II, totalitarianism, the Cold War, and Europe in the post-European era.

240. Afro-American History. (4) The role of Afro-Americans in the development of the United States, with particular attention to African heritage, forced migration, Americanization, and influence.

264. Economic History of the United States. (3) The economic development of the United States from colonial beginnings to the present.

265. American Diplomatic History. (4) An introduction to the history of American diplomacy since 1776, emphasizing the effects of public opinion on fundamental policies.

- 70. Oral History.** (4) How to research family and community history with the tape recorder.
- 71. Colonial Latin America, 1492–1825.** (4) Cultural configurational approach.
- 287, 288. Honors in History.** (4, 4) 287: seminar on problems of historical synthesis and interpretation; 288: writing of a major paper and examination on a special field.
- 10. Seminar.** (4) Offered by members of the faculty on topics of their choice. A paper is required.
- 311, 312. Social and Intellectual History of Modern Europe.** (4, 4) Intellectual trends in Western European civilization. 311: seventeenth and eighteenth centuries; 312: nineteenth and twentieth centuries. *Not offered in '82–'83.*
- 16. France and England in the Twelfth and Thirteenth Centuries.** (4) The structure of society, the nature of law, church/state relations, and intellectual developments. P—History 221 or permission of instructor.
- 19, 320. Germany.** (4, 4) 319: origins of the German nation and the rise of Prussia in context of particularism; 320: from Bismarck to divided Germany.
- 21, 322. France.** (4, 4) 321: from prehistoric Gaul to 1788, with particular emphasis on the sixteenth, seventeenth, and eighteenth centuries; 322: 1788 to the present.
- 23, 324. England.** (4, 4) A political and social survey, with some attention to Continental movements. 323: to 1603; 324: 1603 to present.
- 25. Tudor and Early Stuart England.** (4) A constitutional and social study of England from 1485 to 1641.
- 29, 330. Modern England.** (4, 4) Political, social, economic, and cultural history of England since 1714; 329: to 1815; 330: since 1815.
- 31, 332. Russia** (4, 4) Political, social, economic, and cultural history of Russia. 331: the Russian empire; 332: the Soviet Union.
- 33. European Diplomacy, 1848–1914.** (4) The diplomacy of the great powers, with some attention given to the role of publicity in international affairs. Topics include the unification of Italy and of Germany, the Bismarckian system, and the coming of World War I.
- 35, 336. Italy.** (4, 4) 335: medieval and Renaissance Italy to 1529; 336: 1529 to the present.
- 41. Southeast Asia from 1511 to the Present.** (4) A survey of the history and culture of Southeast Asia under Western colonial systems, with special reference to economic, social, and cultural developments, the rise of nationalism, and the emergence of new nation-states.
- 42. The Middle East from Suleiman the Magnificent to the Present.** (4) Major subjects covered are the rise and fall of the Ottoman Empire, the Arabs and Persians under Ottoman hegemony, the rise of Arab nationalism, and the emergence of the modern Arab states and their roles in the post-World War II era.
- 43. Imperial China.** (4) Development of traditional institutions in Chinese society to

1644; attention to social, cultural, and political factors, emphasizing continuity and resistance to change.

344. Modern China. (4) The Manchu Dynasty and its response to the Western challenge, the 1911 Revolution, the warlord era and the rise of the Communist Chinese Communist society, and the Cultural Revolution.

345, 346. History and Civilization of South Asia. (4, 4) An introduction to the history and civilization of South Asia. Emphasis on historical developments in the social, economic, and cultural life of the area.

347. India in Western Literatures. (4) A one-semester historical survey of images of India in Western literatures, with special reference to religious and philosophical ideas, art, polity, society, and culture.

348. Modern Japan. (4) Tokugawa era; Meiji Restoration; industrialization and urbanization; relations with the West; World War II; occupation; Japan in the contemporary world.

349, 350. East Asia. (4, 4) An introduction to the social, cultural, and political development of China, Japan, and Korea. 349: to 1600; 350: since 1600.

351, 352. American Society and Thought. (4, 4) A non-political topical survey of American culture and lifestyles. Topics include religion, science, education, architecture, and immigration.

353. Colonial English America, 1582–1774. (4) Determinative episodes, figures, allegiances, apperceptions, and results of the period, organically considered.

354. Revolutionary and Early National America, 1763–1815. (4) The American Revolution, its causes and effects, the Confederation, the Constitution, and the new nation.

355. The Westward Movement. (4) The role of the frontier in United States history 1763–1890.

356. Jacksonian America, 1815–1850. (4) The United States in the age of Jackson, Clay, Calhoun, and Webster. A biographical approach.

357. The Civil War and Reconstruction. (4) The political and military events of the war and the economic, social, and political readjustments which followed.

358. The United States from Reconstruction to World War I. (4) National progress and problems during an era of rapid industrialization.

359. The United States from Versailles to Pearl Harbor. (4) The transition of America from World War I to 1941, with special emphasis on the Roaring Twenties and the New Deal.

360. The United States since Pearl Harbor. (4) Trends and changes in the nation from World War II through the Kennedy era to the present.

362. American Constitutional History. (4) Origins of the Constitution, the controversies involving the nature of the Union, and constitutional readjustments to meet the new American industrialism.

33, 364. The South. (4, 4) Geography, population elements, basic institutions, and selected events.

35. Women in American History. (4) A survey of the roles and activities of women in America, with emphasis upon selected individuals.

36. Studies in Historic Preservation. (4) An analysis of history museums and agencies and of the techniques of preserving and interpreting history through artifacts, restorations, and reconstructions. P—Permission of instructor.

37, 368. North Carolina. (4, 4) Selected phases of the development of North Carolina from the colonial beginnings to the present. 367: to 1789; 368: since 1789.

39. The American Military Experience. (4) A survey of the military ideas and activities of the American people and their armed forces, with emphasis on the relationship between war and society.

391, 392. Historiography. (4, 3) The principal historians and their writings from ancient times to the present. 391: European historiography; 392: American historiography.

398. Individual Study. (4) A project in an area of study not otherwise available in the department; permitted upon departmental approval of petition presented by a qualified student.

399. Directed Reading. (1–4) Concentrated reading in an area of study not otherwise available. P—Permission of instructor.

Humanities

N. Rick Heatley, Coordinator

3. Studies in European Literature. (4) A study of approximately twelve works in translation, taken from European literature. Satisfies a Division I requirement.

4. Contemporary Fiction. (4) A study of contemporary European and Latin American fiction in translation. Satisfies a Division I requirement.

5. Germanic and Slavic Literature. (4) A study of approximately twelve works in translation taken from Germanic and Slavic literatures. Satisfies a Division I requirement.

6. Romance Literature. (4) A study of approximately twelve works in translation taken from Romance literatures. Satisfies a Division I requirement.

7. European Drama. (4) A study of selected works in translation, from the seventeenth to the twentieth centuries, by major Continental dramatists. Satisfies a Division I requirement.

10. Discovering the Visual and Verbal Modes of the Twentieth Century. (4) An exploration of the ideas, values, and feelings found in the art and literature of representative twentieth century figures: Kandinsky, Stevens, Picasso, Kafka, Leger, Beckett, Klee, Ionesco, Pollock, Faulkner, Chagall, Barth, and others.

15. Twentieth Century Issues in the Arts. (4) An interdisciplinary investigation of

twentieth-century issues in the arts, taught by art, music, and theatre faculty; topic change yearly; participation by local, regional, and national authorities in the art P—Art 103, or Music 101 or 202, or Theatre Arts 121 or permission of instructor.

340. Race in the Southern Experience before Emancipation: Four Voices. (Selected writings of David Walker, William Lloyd Garrison, Frederick Douglass, and Harriet Beecher Stowe. Pass/Fail only.



42. Race, Politics, and Literature: Aspects of American Life from 1830 to 1930. (4) An examination of the evolution of significant ideas in American civilization. A careful reading of Frederick Douglass, Harriet Beecher Stowe, W. E. DuBois, Mark Twain, and others.

50. What the Arts Have Been Saying since 1800. (4) An experiment in developing interpretive judgment and insight regarding music, painting, and literature as articulations of the frontier consciousness of the period.

52. The Classical and Surreal Tradition. (4) A venture to define and differentiate classical and surreal modes of perception throughout history, their paradoxical relationship to each other and to complementary styles, considered in philosophy, music, literature, and painting.

58. An Editor Looks at the Rights of American Citizens, 1965–Present. (2, 3, or 4) Current developments in the field of constitutional rights as seen by a newspaper editor.

73. France in the Thirties: Literature and Social Consciousness. (4) A study in English of Malraux, Giraudoux, Celine, Bernanos, and St. Exupery. Satisfies a Division I requirement.

74. French Literature in the Mid-Twentieth Century. (4) A study of the literature of the forties and fifties and its evolution from “commitment” to “disengagement.” Authors include Sartre, Camus, Beckett, Robbe-Grillet, Genet, and Duras. Satisfies a Division I requirement.

75. The French Theatre between 1920 and 1960: Theory and Practice. (4) Study of works by Giraudoux, Cocteau, Anouilh, Sartre, Camus, Beckett, Ionesco, and Genet. Satisfies a Division I requirement.

78. Evolution of Autobiography as a Literary Form. (4) A study of autobiography as a form of fiction. Reading of Rousseau's *Confessions* and selected autobiographies of twentieth century French authors. Satisfies a Division I requirement.

79. The Literary Works of Jean-Paul Sartre. (4) A critical study of Sartre's evolution as reflected in his novels and plays from *Nausea* to *The Prisoners of Altona*.

80. Albert Camus. (3) A critical study of Camus' evolution as a writer.

Interdisciplinary Honors

Paul M. Gross Jr., Coordinator

A series of seminar courses of an interdisciplinary nature are open to qualified undergraduates. Students interested in admission to any one of these seminars, supervised by the Committee on Honors, should consult the coordinator or a member of the committee.

Students who choose to participate in as many as four interdisciplinary seminars and who have a superior record may elect Honors 281, directed study culminating in an honors paper and an oral examination. Those whose work has been superior in this course and who have achieved an overall grade point average of at least 3.0 in all

college work may be graduated with the distinction "Honors in the Arts and Sciences." Students who choose to be candidates for departmental honors may not also be candidates for "Honors in the Arts and Sciences."

Able students are normally encouraged to choose a departmental honors program rather than "Honors in the Arts and Sciences." As a result, most students elect to participate in only one or two interdisciplinary seminars in which they are particularly interested. The faculty participants for these seminars represent diverse academic disciplines.

131, 132. Approaches to Human Experience I. (4, 4) An inquiry into the nature and interrelationships of several approaches to man's experience, represented by the work of three such minds as Leonardo da Vinci, Dante, Newton, Gandhi, Confucius, Dostoevsky, Descartes, Goya, Mozart, Jefferson, and Bohr. Seminar discussion based on primary and secondary sources, including musical works and paintings. Written reports and a term paper required. *Offered in alternate years.*

133, 134. Approaches to Human Experience II. (4, 4) A parallel course to Honors 131, 132, concentrating on the work of a different set of figures such as Buber, Galileo, Keynes, Pascal, Camus, Picasso, Ibsen, Tagore, Sophocles, and Bach. *Offered in alternate years.*

***233. Darwinism and the Modern World.** (4) A study of the Darwinian theory of evolution and the impact of evolution and the impact of evolutionary thought on fields such as economics, politics, psychology, literature and the other arts, and philosophy.

***235. The Ideal Society.** (4) Man's effort to establish or imagine the ideal community, state, or society; principles of political and social organization; changing goals and values.

***237. The Scientific Outlook.** (4) An exploration of the origins and development of the scientific method and some of its contemporary applications in the natural and social sciences and the humanities.

***238. Romanticism.** (4) Romanticism as a recurrent characteristic of mind and art and as a specific historical movement in Europe and America in the late eighteenth and nineteenth centuries. Emphasis on primary materials in philosophy, literature, music, and painting.

***239. Man and the Irrational.** (4) The phenomenon of the irrational, with emphasis on its twentieth century manifestations but with attention also to its presence in other centuries and cultures. Philosophy, religion, literature, psychology, politics, and the arts are explored.

***241. The Tragic View.** (4) The theory of tragedy in ancient and modern times; the expression of the tragic in literature, art, music, theatre, and film.

***242. The Comic View.** (4) The theory of comedy in ancient and modern times; the expression of the comic spirit in literature, art, music, theatre, and film.

**One or more offered each year at the discretion of the Committee on Honors.*

- 244. Man and the Structure of the Universe.** (4) An investigation of various conceptions of the universe and their implications for man. Study not necessarily limited to the cosmologies of Ptolemy, Copernicus, and their modern successors, but may also include theories such as the Babylonian, Mayan, and Taoist.
- 246. Man and the Environment.** (4) An interdisciplinary examination of man and society in relation to the environment.
- 247. The Mythic View.** (4) The nature of myth through creation and hero myths; the uses to which myths have been put in different historical periods; various modern explanations of myth (literary, religious, anthropological, psychoanalytic, social, and historical).
- 248. The Ironic View.** (4) An investigation of the ironic view of life in literature, art, history, theatre, and film.
- 250. Ethical Dilemmas in the Arts and Sciences.** (4) An exploration of contemporary issues and controversies in the sciences and art, particularly those involved with ethical questions resulting from new concepts and discoveries.
- 281. Directed Study.** (4) Readings on an interdisciplinary topic approved by the Committee on Honors; preparation of a major research or interpretive paper based on these readings, under the direction of a faculty member; an oral examination on the topic, administered by the faculty supervisor and the Committee on Honors. Eligible students who wish to take this course must submit a written request to the Committee on Honors by the end of the junior year. Not open to candidates for departmental honors.

Mathematics

Marcellus E. Waddill, Chairman

Professors John V. Baxley, Richard D. Carmichael, Ivey C. Gentry

Fredric T. Howard, J. Gaylord May, W. Graham May

John W. Sawyer, Ben M. Seelbinder, Marcellus E. Waddill

Associate Professors Elmer K. Hayashi, Ellen E. Kirkman, James Kuzmanovich

Instructors Charles S. Hinson Jr., Stephen P. Richters, Joanne M. Sulek

A major in mathematics requires forty credits. A student must include courses 111, 112, 113, 121, 221, one of the courses 311, 317, 352, 357, and at least two additional 300-level courses. A prospective teacher in the education block may take 231 in lieu of the course from 311, 317, 352, or 357. Lower division students are urged to consult a member of the departmental faculty before enrolling in courses other than those satisfying Division II requirements.

A minor in computer science requires four courses in computer science numbered higher than 171 and two courses in mathematics other than 105 or 107.

**One or more offered each year at the discretion of the Committee on Honors.*

A minor in mathematics requires Mathematics 111, 112, either 121 or 113, and three other courses numbered higher than Mathematics 113, two of which must be numbered above 200.

A minimum GPA of 2.0 in courses in mathematics is required for graduation with a major or minor in mathematics. A minimum GPA of 2.0 in courses in mathematics and computer science combined is required for graduation with a minor in computer science.

A regularly scheduled activity in mathematics is an informal seminar of students and faculty on topics not discussed in regular courses (for example, finite differences, game theory, Monte Carlo method, divergent series).

The Departments of Mathematics and Economics offer a joint major leading to a Bachelor of Science degree in mathematical economics. This interdisciplinary program affords the student an opportunity to apply mathematical methods to the development of economic theory, models, and quantitative analysis. The major consists of the following course requirements: Mathematics 111, 112, 113, 121, 251; Economics 151, 152, 201, 202, 203; a joint seminar in mathematical economics; and three additional courses chosen with the approval of the program advisers. Recommended courses are Mathematics 253, 348, 353, 357, 358, and Economics 251, 242, 287, 288. Students electing the joint major must receive permission from both the Department of Economics and the Department of Mathematics.

Highly qualified majors are invited by the department to apply for admission to the honors program in mathematics or in the joint majors. To be graduated with the designation "Honors in Mathematics," or "Honors in Mathematical Economics," they must complete satisfactorily a senior research paper and pass a comprehensive oral or written examination. For additional information members of the departmental faculty should be consulted.

Computer Science

171. Introduction to FORTRAN Programming. (2) Lecture and laboratory. A study of FORTRAN language; students use computer terminals as well as card input.

173. Introduction to Computer Programming. (4) Lecture and laboratory. A first course in structured programming, problem solving, and coding in a high level programming language.

175. COBOL Programming. (4) Lecture and laboratory. A study of the elements of COBOL language. P—Computer Science 171 or 173.

271. Computer Organization and Assembly Language Programming. (4) Lecture and laboratory. A study of the ways information is stored and handled in a computer; an introduction to machine and assembly language. P—Computer Science 173 or 175.

361. Selected Topics. (2, 3, or 4) Topics in computer science which are not studied in regular courses or which further examine topics begun in regular courses. Content varies. Not to be counted toward the minor in computer science.

371. Elementary Data Structures. (4) Lecture and laboratory. A course in advanced

programming techniques, including the study of stacks, queues, lists, list processing, and recursion. P—Computer Science 173 or 175.

372. Data Structures. (4) Lecture and laboratory. A continuation of Computer Science 371, including the study of trees, graphs, sorting, searching, and algorithm efficiency. P—Computer Science 371.

381. Individual Study. (2, 3, or 4) A course of independent study directed by a faculty advisor. By prearrangement. Not to be counted toward the minor in computer science.

Mathematics

105. Pre-Calculus Mathematics. (2, 3, or 4) Selected topics deal with the structure of number systems and the elementary functions. Not to be counted toward the major in mathematics.

107. Finite Mathematics. (5) Probability and statistics, matrices, linear programming, Markov chains, and theory of games. Lab—two hours.

108. Essential Calculus. (5) A one-semester course in differential and integral calculus with application to business and the social sciences. No student allowed credit for both 108 and 111. A student who might take additional calculus should not take Mathematics 108. Lab—two hours.

111, 112. Calculus with Analytic Geometry I, II. (5, 5) Calculus of functions of one variable; infinite series. Computer lab using BASIC. No student allowed credit for both 108 and 111.

113. Multivariable Calculus. (4) Vector and space curves. Differentiable functions; surfaces and max-min problems. Multiple integrals and Green's theorems. P—Mathematics 112.

121. Linear Algebra. (4) Vectors and vector spaces, linear transformations and matrices, linear groups, and determinants.

156. Statistical Concepts. (4) An introductory course for the student of statistics who has a limited mathematical background. Includes descriptive techniques, frequency distributions, statistical inference, regression, and correlation. Emphasis is placed on how statistics can be used in society. No student allowed credit for both 156 and 157.

157. Elementary Probability and Statistics. (5) Probability and distribution functions, means and variances, and sampling distributions. Lab—two hours. No student allowed credit for both 156 and 157.

221. Modern Algebra I. (4) An introduction to modern abstract algebra through the study of groups, rings, integral domain, and fields. P—Mathematics 121.

231. Euclidean Geometry. (4) Postulates, definitions, theorems, and models of Euclidean geometry.

251. Ordinary Differential Equations. (4) Linear equations with constant coeffi-

cients, linear equations with variable coefficients, and existence and uniqueness theorems for first order equations. P—Mathematics 112.

253. Operations Research. (4) Mathematical models and optimization techniques. Studies in allocation, simulation, queuing, scheduling, and network analysis. P—Mathematics 111, 107, or equivalent.

311, 312. Advanced Calculus I, II. (4, 4) Limits and continuity in metric spaces, differentiation and Riemann-Stieltjes integration, sequences and series, uniform convergence, power series and Fourier series, partial differentiation and functions of n real variables, implicit and inverse function theorem. P—Mathematics 113.

317. Complex Analysis I. (4) Analytic functions, Cauchy's theorem and its consequences, power series, and residue calculus. P—Mathematics 113.

322. Modern Algebra II. (4) A continuation of modern abstract algebra through the study of additional properties of group and fields and a thorough treatment of vector spaces. P—Mathematics 221.

323, 324. Matrix Theory I, II. (4, 4) Basic concepts and theorems concerning matrices and real number functions defined on preferred sets of matrices. P—Mathematics 121.

332. Non-Euclidean Geometry. (4) Postulates, definitions, theorems, and models of Lobachevskian and Riemannian geometry.

345, 346. Elementary Theory of Numbers I, II. (4, 4) Properties of integers, congruences, arithmetic functions, primitive roots, sums of squares, magic squares, applications to elementary mathematics, quadratic residues, arithmetic theory of continued fractions.

348. Combinatorial Analysis. (4) Enumeration techniques, including generating functions, recurrence formulas, the principle of inclusion and exclusion, and Polya's theorem.

351. Applied Analysis. (4) Topics which have proven useful in the physical sciences, including vector analysis and complex analysis.

352. Partial Differential Equations. (4) The separation of variables techniques for the solution of the wave, heat, Laplace, and other partial differential equations, with the related study of the Fourier transform and the expansion of functions in Fourier, Legendre, and Bessel series.

353. Mathematical Models. (4) Development and application of probabilistic and deterministic models. Emphasis given to constructing models which represent systems in the social, behavioral, and management sciences. P—Mathematics 253.

355. Numerical Analysis. (4) A computer-oriented study of analytical methods in mathematics. Lecture and laboratory. P—Mathematics 112 and Computer Science 171 or 173.

357, 358. Mathematical Statistics I, II. (4, 4) Probability distributions, mathematical expectation, sampling distributions, estimation and testing of hypotheses, regres-

sion, correlation, and analysis of variance. C—Mathematics 113, or P—Permission of instructor.

361. Selected Topics. (2, 3, or 4) Topics in mathematics which are not considered in regular courses or which continue study begun in regular courses. Content varies.

381. Individual Study. (2, 3, or 4) A choice of study in an area of individual interest directed by a faculty adviser.

Military Science

Lieutenant Colonel Matthew P. Murray Jr., Professor

Major Robert H. Lewis, Major James H. Wakeman,

Captain David E. Janney, Captain Jasper L. McBride,

Captain Curtis L. Shelton, Captain David E. Walters,

Assistant Professors

Sergeant Major Ezequiel B. Evaro, Master Sergeant Curtis Torry,

Sergeant First Class Donald F. Pope, Staff Sergeant Albert E. Folds

Completion of the Reserve Officer Training Corps requirements results in the conferring of a commission in the United States Army. The basic courses (110, 111, 112, 113, 114, 116, 202S) are designed to provide the fundamentals of military history, Army organization and operation, leadership, and managerial assessment methods. The advanced courses (211, 212, 251, 252) provide study in professional knowledge subjects and development of the managerial skills required for commissioning.

110. ROTC and the National Defense. (2) Introduction to the Reserve Officers' Training Corps program, the United States Army, and basic professional knowledge subjects.

111. Military History. (2) Survey of the ideas and activities of the American people which contributed to the development of the Armed Forces; relationship between war and society.

112. Operations in Special Environments. (2) Planning and preparation for military operations in mountain, desert, jungle, and arctic environments; fundamentals of survival; mountaineering techniques.

113. Tactical Considerations of Modern Battle. (2) Organization and Operations of the United States Army. A non-classified comparison with the Army of the Soviet Union. Modern battle doctrine and equipment capabilities of both armies are analyzed in both conventional and special tactical environments.

114. Leadership. (2) An examination of the fundamentals contributing to the development of a personal style of leadership with emphasis on the dimensions of junior executive management.

116. Orienteering. (2) A study of navigational aids, linear time/distance relationships, and mapping techniques. Includes navigating in unfamiliar terrain.

202S. Combined Military Fundamentals. (4) History and organization of the United

States Army. Basic and intermediate military skills to include leadership styles and techniques, land navigation, dismounted drill, and mountaineering. P—Permission of instructor. *Offered in the summer.*

211, 212. First Year Advanced. (2, 2) Accelerated leadership training; professional knowledge subjects; preparation for ROTC Advanced Summer Camp; advanced instruction on the Soviet Army. LAB—1½ hours per week. P—credit for one of the following:

- (1) 110 and two other MS basic courses, or
- (2) 202S (Combined Military Fundamentals), or
- (3) Attendance at ROTC Basic Summer Camp at Fort Knox, Kentucky (no academic credit).

251, 252. Second Year Advanced. (2, 2) Professionalism and Ethics; planning and supervision of leadership laboratory program, active duty orientation, military administration, law, and logistics. LAB—1½ hours per week. P—Military Science 211 and 212.

Music

John V. Mochnick, Acting Chairman

Associate Professor Annette LeSiege

Assistant Professors Christopher Giles, Louis Goldstein,

David B. Levy, Donna Mayer-Martin, John V. Mochnick

Director of Bands R. Davidson Burgess

Instructors Lucille S. Harris, Teresa Radomski

A major in music requires forty-eight credits. This includes a basic curriculum of thirty-six credits (Music Theory 171, 172, 173, and 174, sixteen credits; Music History 181, 182, six credits; ten credits of applied music, and four credits of ensemble) plus twelve additional credits of elective courses in music. In addition to the course work, music majors are required to present a senior recital or project.

Students anticipating a major in music are urged to begin their studies during the freshman year and are required to audition during the second semester of their sophomore year before being officially admitted to the program.

Highly qualified majors may be invited to apply for admission to the honors program in music. To be graduated with the designation "Honors in Music," a candidate must complete one of the following requirements: (1) an honors-level research paper, (2) an original composition, or (3) an analytical lecture related to music performed by the candidate in a public recital.

A minor in music requires twenty-four credits: Music 171, 172; 181, 182; two semesters of ensemble; two semesters of applied music (performance level in applied music must be equal to the level expected of the majors at the time of the spring sophomore audition); six credits of music electives (excluding ensemble). Each minor will be assigned an adviser in the Music Department and is encouraged to begin private lessons as early as possible.

Any student interested in majoring or minoring in music should consult the chairman of the department as soon as possible after entering the University.

Music Theory

01. Introduction to the Language of Music. (3, 4) Basic theoretical concepts and musical terminology. Survey of musical styles, composers, and selected works from the Middle Ages through the twentieth century. For students not majoring in music.

02. Language of Music I. (3, 4) Survey of musical styles, composers, and selected works from the Middle Ages through the twentieth century. For students who can read music. Not open to music majors. P—Permission of instructor.

04. Basic Music Reading and Skills. (2) A study of the fundamentals of music theory including key signatures, scales, intervals, and chords, and basic sight-singing and ear training skills. Designed for students wishing to participate in University ensembles and those wishing to pursue vocal, instrumental, and compositional instruction.

05. Music Theory for Non-Majors (4) A study and application of music fundamentals and music theory for the non-music major: analytical and compositional techniques. P—104 or permission of instructor.

71. Music Theory I. (4) Music fundamentals: key signatures, scales, modes, intervals, triads, elements of music. Ear training, sight singing, and rhythm skills. (A one-hour piano class is required of students having no keyboard background.)

72. Music Theory II. (4) Seventh chords, beginning part-writing, basic counterpoint, ear training, sight singing, rhythm skills, keyboard harmony. P—Music 171.

73. Music Theory III. (4) Altered chords, continuation of part-writing, eighteenth and nineteenth century forms, ear training, sight singing, rhythm skills, keyboard harmony. P—Music 172.

74. Music Theory IV. (4) Expanded harmonic system of Impressionism and the twentieth century. New concepts of style and form. Ear training, sight singing, rhythm skills, keyboard harmony. P—Music 173.

102. Language of Music II. (3, 4) An in-depth study of selected major works from the Middle Ages through the twentieth century. Not open to music majors. P—Music 101 or 102 or permission of instructor.

70. Sixteenth Century Counterpoint. (2) Analysis of sixteenth century contrapuntal music, in particular that of Palestrina. Examination of Renaissance writings on counterpoint. Composition of canon and motet. *Offered in alternate years.* P—Music 174.

71. Eighteenth Century Counterpoint. (2) Analysis of eighteenth century contrapuntal styles, with concentration on the *Well-Tempered Clavier* and *Art of the Fugue* of J. S. Bach. Composition of invention, canon, and fugue. *Offered in alternate years.* P—Music 174.

272. Analysis Seminar. (2) A study of analytical writings of theorists and composers and the development of practical skills as they can be used in research and performance preparation. *Offered in alternate years.* P—Music 174.

273. Composition. (1 or 2) Individual instruction in the craft of musical composition. May be repeated for credit. P—Permission of instructor.

275. History of Theory. (2) A study of theoretical writing on musical acoustics, instruments, and notation from classical Greece to the present. *Offered in alternate years.* P—Music 174.

276. Current Practices. (2) A survey of twentieth century compositional techniques, notation, and performance problems involving the study of music and theoretical writings associated with major trends from 1900 to the present. *Offered in alternate years.* P—Music 174.



Music History

124. Chamber Music. (2) Study of the history and repertoire of chamber music from the late Baroque to the twentieth century. Classroom work combined with actual rehearsal and performance of chamber repertoire. May be repeated for credit. P—Audition and permission of instructor.

181. Music History I. (3) History of music from the Greeks to 1750.

182. Music History II. (3) History of music from 1750 to the present. P—Music 181.

201. Music History for Non-Majors. (3, 4) An historical survey of stylistic trends, major composers, and genera. P—Music 101 or 102 or permission of instructor.

a. Middle Ages

d. Classical

b. Renaissance

e. Romantic

c. Baroque

f. Contemporary

203. History of Jazz. (2) A survey of American jazz from its origin to the present. Open to majors and non-majors. P—Music 101 or 102 or permission of instructor.

204. Survey of Choral Music. (2) An historical overview of important genera (i.e., anthem, cantata, motet, mass, oratorio) with an emphasis on church music and liturgical function. Open to majors and non-majors. P—Music 101 or 102 or permission of instructor.

205. Survey of Orchestral Music. (2) An historical overview of important orchestral repertoire (i.e., symphony, concerto, overture, symphonic poem). Open to majors and non-majors. P—Music 101 or 102 or permission of instructor.

206. Survey of Opera. (2) A study of the development of opera from 1600 to the present. Selected operas by European and American composers will be examined in class via record, score, and film. Class will attend opera performances when possible. Open to majors and non-majors. P—Music 101 or 102 or permission of instructor.

207. Music in America. (2) A study of the music and musical trends in America from 1650 to the present. The course will survey sacred and secular music from the Pilgrims to the current trends of American composers. P—Music 101 or 102 or permission of instructor.

212. Music in the Church. Function of the church musician and the relationship of his or her work to the church program. P—Music 174, 182.

215. Philosophy of Music. (2) A survey of philosophical writings about music. Musical aesthetics; social, religious, and political concerns. P—Music 174, 182.

219. Seminar in Medieval Music. (3) A study of medieval music, its philosophy, theory (including notational practices), and performance practices. Areas receiving special emphasis are Gregorian chant repertoire, the Notre Dame School, *Ars Antiqua*, and *Ars Nova*. P—Music 174, 182 or permission of instructor.

220. Seminar in Renaissance Music. (3) A study of music from 1400 to 1600, its theory (including notational practices), and performance practices. The study begins with the Burgundian School, with special areas of emphasis the Netherlands composers and the late Renaissance madrigal. P—Music 174, 182 or permission of instructor.

221. Seminar in Baroque Music. (3) Musical activity from about 1600 to Bach and Handel. Special emphasis on the development of national styles and their resolutions toward the end of the era. P—Music 174, 182 or permission of instructor.

222. Seminar in Eighteenth Century Music. (3) Musical developments from the sons of Bach through the Viennese Classicism of Haydn, Mozart, and Beethoven. P—Music 174, 182 or permission of instructor.

223. Seminar in Nineteenth Century Music. (3) Music from the latter part of Beethoven's career through Wagner and Brahms. Special emphasis on the post-Beethoven schism and its ramifications. P—Music 174, 182 or permission of instructor.

224. Seminar in Twentieth Century Music. (3) A study of the major musical styles, techniques, and media of contemporary music from Debussy to the present. P—Music 174, 182 or permission of instructor.

Music Education

186. String Instruments. (2) Fundamentals of playing and teaching all instruments of the string family. *Offered in alternate years.*

187. Woodwind Instruments. (2) Fundamentals of playing and teaching all principle instruments of the woodwind family. *Offered in alternate years.*

188. Brass and Percussion Instruments. (2) Fundamentals of playing and teaching brass and percussion instruments. *Offered in alternate years.*

280. Orchestration. (4) A study of the orchestral and wind band instruments, how composers have used them throughout history, and the development of practical scoring and manuscript skills. *Offered in alternate years.* P—Music 174, 182.

282. Conducting. (4) A study of conducting technique; practical experience with ensembles. P—Music 174 or permission of instructor.

284. Music Literature Seminar. (3 or 4) A survey of repertoire, including an examination of teaching materials in the student's special area of interest. P—Permission of instructor.

289. Ensemble Methods. (2) A practical study of choral and instrumental training techniques. Discussion of tonal development, administration, bibliography, choral and instrumental repertoire, marching band, and instrumental problems. P—Music 101 or 102 or permission of instructor.

291. Teaching of Music. (4) The teaching and supervision of choral and instrumental music in the public schools, all grades. P—Music 174, 182.

Honors and Individual Study

298. Individual Study. (2 or 4) A project in an area of study not otherwise available in the department. By pre-arrangement.

299. Honors in Music. (4) Individual study for honors candidates who have fulfilled the specific requirements.

Ensemble

Departmental ensembles are open to all students. Credit is earned on the basis of one credit per semester of participation.

11. Opera Workshop. Study, staging, and performance of standard and contemporary operatic works. P—Permission of instructor.

12. Collegium Musicum. An ensemble stressing the performance practices and the performance of music of the medieval, Renaissance, and Baroque eras. Open to vocalists and instrumentalists.

13. Orchestra. Study and performance of orchestral works from the classical and contemporary repertoire. P—Audition.

14. Madrigal Singers. A vocal chamber ensemble which specializes in the performance of secular repertoire. P—Audition.

15. Concert Choir. A select touring choir of forty-five voices which performs a variety of choral literature from all periods. P—Audition.

16. Choral Union. A large oratorio chorus which concentrates on the performance of major choral works. P—Audition.

17. Marching Deacons Band. Performs for most football games. Meets twice weekly. No audition required. *Fall*.

18. Concert Band. Study and performance of music for wind band. P—Permission of instructor. *Spring*.

19. Symphonic Wind Ensemble. Study and performance of music for wind ensemble. Regular performances on and off campus, including an annual tour. P—Audition.

21. Jazz Ensemble. Study and performance of written and improvised jazz for a twenty-member ensemble. P—Audition.

23. Piano Ensemble. Study of the elements of accompanying and ensemble playing through class discussion and studio experience. P—Permission of instructor.

Applied Music

Applied music courses are open to all students with the permission of the instructor. Credit is earned on the basis of lesson duration and weekly preparation. One

credit per semester implies a half-hour of instruction weekly and a minimum of one hour of daily practice. Two credits per semester imply an hour of instruction weekly and a minimum of two hours daily practice. With the permission of the music faculty and with a proportional increase in practice, a student may earn three or four credits per semester. Students in applied music who do not have basic knowledge of notation and rhythm are advised to enroll in Music 101 either prior to or in conjunction with applied study. An applied music fee and practice fee are charged for all individual instruction.

161, 261. Individual Instruction. (1 or 2) May be repeated for credit. Technical studies and repertoire of progressive difficulty selected to meet the needs and abilities of the student.

<i>a. violin</i>	<i>f. oboe</i>	<i>k. French horn</i>	<i>p. piano</i>
<i>b. viola</i>	<i>g. clarinet</i>	<i>l. trombone</i>	<i>q. percussion</i>
<i>c. cello</i>	<i>h. bassoon</i>	<i>m. baritone</i>	<i>r. guitar</i>
<i>d. bass</i>	<i>i. saxophone</i>	<i>n. tuba</i>	<i>v. voice</i>
<i>e. flute</i>	<i>j. trumpet</i>	<i>o. organ</i>	

165p. Class Piano. (1) Scales, chords, inversions, and appropriate repertoire, with emphasis on sight-reading, harmonization, and simple transposition. Designed for the beginning piano student.

165r. Class Guitar I. (1) Introduction to guitar techniques: strumming, plucking, arpeggi, and damping. Reading and playing from musical notation and guitar tablature. For beginning students.

166r. Class Guitar II. (1) Continuation of guitar techniques. Emphasis on chordal progressions, scales, accompanying patterns, and sight reading. P—Music 165r.

165v. Class Voice I. (1) Introduction to the fundamental principles of singing; concepts of breath control, tone, and resonance.

166v. Class Voice II. (1) Continuation of fundamental vocal techniques. P—Music 165v or permission of instructor.

167v. Theatrical Singing I: Class Voice (1) Basic techniques of singing, breath control, phonation, and resonance, with emphasis on theatrical projection. Study and performance of musical theatre repertoire. (One hour per week).

168v. Theatrical Singing II: Class Voice (1) Continuation of theatrical singing techniques with increased study and performance of musical theatre repertoire. P—Music 167v or permission of instructor. (One hour per week).

190. Diction for Singers. (2) Study of articulation in singing, with emphasis on modification of English; pronunciation of Italian, German, and French. Development of articulatory and aural skills with use of the international phonetic alphabet. Individual performance and coaching in class. (Two hours per week).

Philosophy

Gregory D. Pritchard, Chairman

Professors Robert M. Helm, Marcus B. Hester, Gregory D. Pritchard

Associate Professor Charles M. Lewis

Assistant Professor Ralph C. Kennedy III

Visiting Assistant Professor Floyd Edwin Wike

A major in philosophy requires thirty-six credits. The courses must include 261 and either 161 or 271, two courses from the history sequence (201, 211, 222), and one course from each of the following: 230, 231, 241, 242, or 292; 275, 279, 282, 285, or 287. In addition to these courses, a major in philosophy requires a "major paper," consisting of twenty-five or more type-written pages, to be submitted for a course, chosen by the student, from among philosophy courses taken during his or her last three semesters. This paper may also satisfy the term paper requirement for the course.

A minor in philosophy requires six courses, one of which shall be either Philosophy 111, 171, or 172. These courses are to be chosen in accordance with one of the following plans, each of which allows two general electives. Although plans A, B, and C are designed to complement majors in the specified areas, any one of the plans may be chosen by someone who wants to pursue other interests.

(A) *Art, Literature, and Religion*

Philosophy of Art and/or Philosophy of Religion; one or more concentration courses (230, 231, 241, 242, 292); one or more of the following: 201, 211, 222, 261, 275.

(B) *Natural Science*

Philosophy of Science; Logic and/or Symbolic Logic; one or more of the following: 201, 211, 222, 230, 231, 233, 241, 275, 292.

(C) *Social Science, Politics, and Law*

Ethics and/or Philosophy of Law; Logic and/or Symbolic Logic; one or more of the following: 201, 211, 230, 231, 241, 242, 275, 279, 287, 292.

(D) *Open Plan*

With departmental approval, a fourth option will be available to students for whom none of the specified plans would be appropriate.

The Spilman Philosophy Seminar, open to advanced students in philosophy, was established in 1934 through an endowment provided by Bernard W. Spilman. The income from the endowment is used for the seminar library, which now contains about 4,000 volumes. Additional support for the library and other departmental activities is provided by the A. C. Reid Philosophy Fund, which was established in 1960 by friends of the department. The furniture in the library and seminar room was donated in honor of Claude V. Roebuck and Mr. and Mrs. W. A. Hough by their families.

Two distinguished alumni of the College have made possible the establishment of a lectureship and a seminar. The late Guy T. Carswell endowed the Guy T. and Clara

Carswell Philosophy Lectureship, and a gift from James Montgomery Hester established the Hester Philosophy Seminar. In addition, a lectureship bearing his name has been instituted in honor of Claude V. Roebuck.

Superior majors are invited by the department to apply for admission to the honors program in philosophy. To be graduated with the designation "Honors in Philosophy," a qualified student must submit an acceptable prospectus for an honors thesis by November for graduation in the spring semester or by May for graduation in the fall semester, present a satisfactory paper based on the prospectus, (as judged by the student's honors adviser and at least one other member of the department) and show an acceptable level of performance in a discussion of the paper with the honors adviser and at least one other member of the department. In lieu of a prospectus, the student's "major paper" may be submitted, provided that this occurs in the semester before the semester in which he or she is to graduate and provided that the paper is re-written in view of criticism and additional research materials appropriate for an honors paper.

111. Basic Problems of Philosophy. (4) An examination of the basic concepts of several representative philosophers, including their accounts of the nature of knowledge, man, God, mind, and matter.

161. Logic. (4) An elementary study of the laws of valid inference, recognition of fallacies, and logical analysis.

171, 172. Meaning and Value in Western Thought. (4, 4) A critical survey of religious and philosophical ideas in the Western world from antiquity to modern times. Either Philosophy 171 or 172 satisfies the philosophy or religion requirement; both 171 and 172 satisfy both the philosophy and religion requirements; choice determined at registration.

182. Medical Ethics. (4) A study of moral problems in medicine including informed consent, experimentation on human subjects, truth-telling, confidentiality, abortion, euthanasia, and the allocation of scarce medical resources. P—Philosophy 111, 171, or 172.

201. Ancient and Medieval Philosophy. (4) A study of philosophical problems such as the nature of faith, reason, universals, and God in the thought of Plato, Aristotle, Augustine, Abelard, Anselm, Aquinas, and Ockham. P—Philosophy 111, 171, or 172.

211. Modern Philosophy. (4) A survey of major philosophers from Descartes to Nietzsche. P—Philosophy 111, 171, or 172.

222. Contemporary Philosophy. (4) A survey of major philosophers from Russell to Sartre. P—Philosophy 111, 171, or 172.

225. American Philosophy. (4) A study exploring the philosophies of Jonathan Edwards, Ralph Waldo Emerson, C. S. Pierce, William James, John Dewey, and others, examining their views on logic, experience, science, reality, nature, art, education, and God. P—111, 171, or 172.

230. Plato. (4) A detailed analysis of selected dialogues, covering Plato's most impor

ant contributions to ethics, political philosophy, theory of knowledge, metaphysics, and theology. P—Philosophy 111, 171, or 172.

231. Aristotle. (4) A study of the major texts, with emphasis on metaphysics, ethics, and theory of knowledge. P—Philosophy 111, 171, or 172.

233. Space and Time in Fact and Fiction. (4) Are space and time fundamentally different? Are they properties of the physical world or of minds only? Are they finite or infinite in extension and duration? Other questions cover problems and paradoxes in the concept of space and in the concept of time travel. P—Philosophy 111, 171, or 172. Not open to students who have credit for Philosophy 133.

241. Kant. (4) A detailed study of selected works covering Kant's most important contributions to theory of knowledge, metaphysics, ethics, and religion. P—Philosophy 111, 171, or 172.

242. Hegel, Kierkegaard, and Nietzsche. (4) An examination of selected sources embodying the basic concepts of Hegel, Kierkegaard, and Nietzsche, especially as they relate to each other in terms of influence, development, and opposition. P—Philosophy 111, 171, or 172.

258. Wittgenstein. (4) An examination of the work of Ludwig Wittgenstein on several central philosophical problems is studied and compared with that of Frege, James, and Russell. Topics include the picture theory of meaning, truth, scepticism, private languages, thinking, feeling, the mystical, and ethical. P—Philosophy 111, 171, or 172.

261. Ethics. (4) A critical study of selected problems and representative works in ethical theory. P—Philosophy 111, 171, or 172.

271. Symbolic Logic. (4) Basic concepts and techniques of modern deductive logic, beginning with the logic of truth-functions and quantifiers, and including some discussion of such topics as Church's thesis and theorem, the completeness of first-order logic, and Godel's incompleteness theorems.

275. Philosophy of Mind. (4) A selection from the following topics: the mind-body problem; personal identity; the unity of consciousness; minds and machines; the nature of experience; action, intention and the will. Readings from classical and contemporary sources. P—Philosophy 111, 171, or 172.

279. Philosophy of Science. (4) A systematic exploration of the conceptual foundations of scientific thought and procedure. P—Philosophy 111, 171, or 172.

282. Philosophy of Law. (4) A philosophical inquiry into the nature of law and its relation to morality. Classroom discussions of readings from the works of classical and modern authors focus on issues of contemporary concern involving questions of legal principle, personal liberty, human rights, responsibility, justice, and punishment. P—Philosophy 111, 171, or 172.

285. Philosophy of Art. (4) A critical examination of several philosophies of art, with emphasis upon the application of these theories to particular works of art. P—Philosophy 111, 171, or 172.

287. Philosophy of Religion. (4) A systematic analysis of the logical structure of religious language and belief, including an examination of religious experience, mysticism, revelation, and arguments for the nature and existence of God. P—Philosophy 111, 171, or 172.

294. Seminar in Epistemological Problems. (4) P—Philosophy 111, 171, or 172.

295. Seminar in Metaphysical Problems. (4) P—Philosophy 111, 171, or 172.

296. Independent Study. (2, 4).

Physical Education

William L. Hottinger, Chairman

Professors William L. Hottinger, Paul M. Ribisl

**Assistant Professors Dorothy Casey, Leo Ellison, Stephen Messier,
Walter Rejeski**

Visiting Assistant Professor Sarah D. Hutslar

Instructors Susan E. Balinsky, Donald Bergey, Gary Hall, Rebecca Myers

The purpose of the Department of Physical Education is to organize, administer, and supervise (1) *a professional education program* which prepares students interested in the field of physical education; (2) *a required/elective physical education program* consisting of conditioning activities, dance, and individual and team sports; and (3) *an intramural sports program* which provides a wide variety of competitive activities.

Physical Education Requirement

All entering students are required to complete two semesters of physical education: Physical Education 111, *Foundations of Health and Physical Fitness*, and one additional course selected from the 100-series of physical education courses. The requirement must be met before enrollment in additional courses for electives. It is recommended that the requirement be completed by the end of the student's first year; it must be completed by the end of the second year.

Courses in Basic Instruction and Elective Physical Education

111. *Foundations of Health and Physical Fitness*

112. *Sports Proficiency*

113. *Adaptive Physical Education*

114. *Weight Control*

115. *Physical Conditioning*

116. *Weight Training*

119. *Aerobic Dancing*

120. *Beginning Dance Technique*

121. *Intermediate Dance Technique* (P—Physical Education 120 or permission of instructor)

122. *Advanced Dance Technique* (P—Physical Education 121 or permission of instructor)

123. *Dance Composition* (P—Physical Education 121)

124. *Social Dance*

25. *Folk and Social Dance*
26. *Jazz Dance*
30. *Beginning Tumbling/Free Exercise*
31. *Intermediate Tumbling/Free Exercise*
32. *Beginning Gymnastic Apparatus*
33. *Intermediate Gymnastic Apparatus*
34. *Acro-Sports*
40. *Beginning Swimming*
41. *Intermediate/Advanced Swimming*
43. *Water Ballet/Synchronized Swimming*
44. *Springboard Diving*
45. *Advanced Lifesaving and Cardio-Pulmonary Resuscitation (P—Strong swimming ability)*
46. *Water Safety Instructor's Course (P—Current advanced lifesaving certification)*
50. *Beginning Tennis*
51. *Intermediate Tennis*
52. *Advanced Tennis (P—Physical Education 151 or permission of instructor)*
54. *Beginning/Intermediate Badminton*
55. *Beginning Squash Racquets*
56. *Beginning Racketball*
57. *Intermediate Racketball*
60. *Beginning Golf*
61. *Intermediate Golf*
62. *Archery*
63. *Bowling*
64. *Beginning/Intermediate Handball*
65. *Recreational Games*
70. *Volleyball*
71. *Soccer*
75. *Wrestling*
76. *Fencing*
79. *Beginning Horseback Riding*
80. *Intermediate/Advanced Horseback Riding*
81. *Snow Skiing*
82. *Beginning Ice Figure Skating*
83. *Intermediate/Advanced Ice Figure Skating*
90. *Karate*
91. *Yoga*

Courses for the Major and Minor

Students desiring to elect a major in physical education must be of junior standing. Biology 111 and 150 are required. Three tracks are available to majors in physical education, they are general physical education, teacher certification, and exercise science. All tracks require the following core of courses in physical education: 111,

212, 230, 250, 352, 353, 360, three beginning 100-level courses and two intermediate/advanced 100-level courses.

Students in the general track must take the following courses in physical education: 222, 224, 251, plus at least two courses from the following: 220, 226, 240, 310, 363 and 370. Students in the teacher certification track must take the following courses in physical education: 125, 222, 224, 226, 240, 251, and 363. Students in the exercise science track must take Physical Education 215 and 370 plus a ten-hour science sequence in biology (beyond 111-150), chemistry, mathematics, or physics. The science sequence will be determined in consultation with the major adviser. Physical Education 382 is recommended, but not required.

Students desiring a minor must take the following courses in physical education: 111, 212, 230, 250, 352, 353, three beginning 100-level courses and either 226 or two intermediate/advanced 100-level courses.

Highly qualified majors are invited by the department to apply for admission to the honors program in physical education. Upon successfully meeting specifically outlined requirements, they are recommended for graduation with "Honors in Physical Education." Consult an adviser in the Physical Education Department for an outline of the requirement.

Any student interested in majoring in physical education should consult the chairman of the department as soon as possible after entering the University.

201. Outdoor Exploration. (2) Introduction to various outdoor recreational and survival skills.

205. Basic Skin and Scuba Diving and Open Water Certification. (2) A course in skin and SCUBA diving that offers international certification by the Professional Association of Diving Instructors (PADI).

208. Current Topics in Sports Psychology. (2) A survey of the field with an emphasis on current topics. Students may not receive credit for both 208 and 212.

212. The Psychology of Sport and Physical Activity. (4) An examination of the social-psychological foundations of sport and exercise related phenomena. Attention is given to performance as well as mental health issues in these domains. The topics discussed include coach-athlete interactions, youth sport, the profile of elite performers, women in sport, and compliance to exercise programs.

215. Laboratory Techniques in Exercise Science. (2) A laboratory course designed to acquaint the student with standard techniques of measurement in exercise science (i.e., anthropometry, body composition, energy metabolism, work ergometry, etc.) in the study of the physiologic response to exercise. P—Physical Education 353.

220. Methods and Materials in Aquatics. (2) Presentation of knowledge, skill, and methods of teaching aquatics.

222. Sports Activities I. (2) A development of theory and skill in selected sports (volleyball, softball, soccer).

223. Health and Physical Education for the Intermediate Grades. (4) The development of physical education skills appropriate for the intermediate grade teacher and

an understanding of the personal and community health needs appropriate for the grade level.

224. Sports Activities II. (2) A development of theory and skill in selected sports (tennis, gymnastics, wrestling, or badminton). P—Physical Education 130 or 132.

226. Sports Activities and Methods of Teaching. (3) A development of theory and skill in selected sports and methods of class administration (baseball, track and field, methods of teaching).

230. First Aid and Athletic Training. (2) A study of first aid techniques and the care and treatment of athletic injuries.

240. Physical Education for Pre-School and Elementary School. (3) A study of the developmental stages of fundamental motor skills and a presentation of methods of teaching physical education activities to the pre-school and elementary school child.

250. Principles of Physical Education and Motor Learning. (3) A study of the principles and foundations of the field of physical education, with emphasis on learning theories important to psychomotor development.

251. Organization and Administration. (3) A study of organization and administration of physical education and athletic programs.

310. Applied Field Study. (2) A course involving application of theory and methods of solving problems in a specialized area according to the student's immediate career goals. P—Physical Education 250 or permission of instructor.

352. Anatomy and Kinesiology. (5) A study of the principles of human motion based on the functional knowledge of the anatomical structure of the human body.

353. Physiology of Exercise. (4) The course presents the many effects of muscular activity on the processes of the body which constitute the scientific basis of physical education.

360. Evaluation and Measurement in Health and Physical Education. (3) A course in measurement techniques and beginning statistical procedures to determine pupil status in established standards of health and physical education which reflect the prevailing educational philosophy.

363. Health and Adapted Physical Education. A study of personal and community health needs of school age children and methods of administering physical education programs for special students.

370. Advanced Anatomy and Biomechanics. (5) An advanced study of the anatomical structure and the biomechanical principles involved in human motion. Laboratory study will include cadaver dissection and analysis of movement. P—Physical Education 352.

382. Individual Study in Health and Physical Education. (1–4) Library conferences and laboratory research performed on an individual basis.

Physics

George P. Williams Jr., Chairman

Professors Robert W. Brehme, Ysbrand Haven, Howard W. Shields,

George P. Williams Jr.

Associate Professor William C. Kerr

Assistant Professor George Eric Matthews

The program of courses for each student majoring in physics is developed through consultation with the student's major adviser and may lead to either a Bachelor of Arts or a Bachelor of Science degree. The B.A. degree requires a minimum of basic physics courses and allows a wide selection of electives related to the student's interests in other disciplines. The B.S. degree is designed to prepare students for careers in physics, perhaps beginning with graduate study.

The Bachelor of Arts degree in physics requires thirty-seven credits in physics and must include courses 161, 162, 345, and two from 230, 352, and 351. The Bachelor of Science degree in physics requires forty-five credits in physics and must include courses 311, 312, 343, 344, 345, and 346. In special cases the department may allow substitutions. For either degree, two courses in chemistry or the equivalent and Mathematics 251 are required.

A typical schedule for the first two years:

<i>Freshman</i>	<i>Sophomore</i>
Basic and divisional requirements	Basic and divisional requirements
Physics 111, 112 or 121, 122	(five courses)
Mathematics 111, 112	Physics 161, 162
Foreign Language	Mathematics 251

If this sequence is followed, the physics major may be completed in such a way as to allow considerable flexibility in exercising various options, such as the five-year B.A./M.S. program. (For information about this program, consult the department chairman.) This saves time, and the outstanding student may qualify for a tuition scholarship in the senior year of the five-year program.

A minor in physics requires twenty-four credits including Physics 111-112 or 121-122, 161, and 162. Students interested in the minor should so advise the instructor of 161 or 162.

If Physics 111, 112 or 121, 122 is not taken in the freshman year, one of the sequences may be taken in the sophomore year; the degree requirements in physics may still be completed by the end of the senior year. No student may be a candidate for a degree with a major in physics with a grade less than C in general physics without special permission of the department.

Satisfactory completion of the laboratory work is required for a passing grade in all courses with a laboratory.

Highly qualified majors are invited by the department to apply for admission to the honors program in physics. To be graduated with the designation "Honors Physics," students must complete satisfactorily Physics 381 and pass a comprehensive written examination. For additional information on these programs or on the e

engineering program the chairman or a member of the departmental faculty should be consulted.

101. Conceptual Physics. (5) A non-mathematical introduction to the essential principles of classical and modern physics based on a conceptual treatment of the more exciting contemporary aspects of the subject. Credit not allowed for both 101 and 111. Lab—two hours.

104. Introductory Physics for Teachers. (3 or 4) No lab. Does not satisfy Division II requirements.

105. Descriptive Astronomy. (4) An introductory study of the universe, from the solar system to the galaxies. No lab. Does not satisfy Division II requirements.

106. Physics and the Sounds of Music. (3 or 4) A study of the production, propagation, and perception of musical sounds. Satisfies no divisional requirements. No prerequisites; no lab.

108. Energy and the Environment. (2) A descriptive, non-mathematical introduction to the concept of energy and its role in the environment. Does not satisfy Division II requirements.

111, 112. Introductory Physics. (5, 5) Essentials of mechanics, wave motion, heat, sound, electricity, magnetism, optics, and modern physics for freshmen and sophomores. Lab—two hours.

121, 122. General Physics. (5, 5) A course designed for those who expect to major in physics or chemistry. A calculus treatment of the topics covered in 111, 112. A student may not receive credit for both this course and Physics 111, 112. Lab—two hours. C—Mathematics 111.

141. Elementary Modern Physics. (4) The development of twentieth century physics and an introduction to quantum ideas. P—Physics 112 or 121; C—Mathematics 112.

161. Applied Mechanics. (5) The fundamental principles of mechanics. Lab—three hours. *Offered in the spring of even-numbered years.* P—Physics 111 or 121 and Mathematics 111 or equivalent.

162. Introductory Electricity. (5) The fundamental principles of electricity, magnetism, and electromagnetic radiation. Lab—three hours. P—Physics 112; C—Mathematics 112.

230. Electronics. (4) Introduction to the theory and application of transistors and electronic circuits. Lab—three hours. *Offered in the fall of odd-numbered years.* P—Physics 162 or equivalent.

301, 302. Physics Seminar. (0, 0) Discussion of contemporary research, usually with visiting scientists. Attendance required of junior and senior physics majors.

311. Mechanics. (4) A junior/senior level treatment of analytic classical mechanics. P—Mathematics 251.

312. Electromagnetic Theory. (4) A junior/senior level treatment of classical electromagnetic theory. P—Physics 162 and Mathematics 251.

331, 332. Acoustics I, II. (4, 4) A study of the fundamental principles and applications of the generation, transmission, and reception of sound and its interaction with various media.

343, 344. Modern Physics. (4, 4) Application of the elementary principles of quantum mechanics to atomic and molecular physics.

345, 346. Modern Physics Laboratory. (1, 1) The laboratory associated with Physics 343, 344. Lab—three hours.

351. Thermodynamics and Statistical Mechanics. (4, 4) Introduction to classical and statistical thermodynamics and distribution functions. *Offered in the spring of odd-numbered years.*

352. Physical Optics and Spectra. (5) A study of physical optics and the quantum treatment of spectra. Lab—three hours. *Offered in the fall of even-numbered years.*

381. Research. (4) Library, conference, and laboratory work performed on an individual basis.

Politics

Richard D. Sears, Chairman

Professors Jack D. Fleer, C. H. Richards Jr.,

Professor of History and Asian Studies Balkrishna Govind Gokhale

Associate Professors David B. Broyles, Carl C. Moses,

Jon M. Reinhardt, Donald O. Schoonmaker, Richard D. Sears

Visiting Assistant Professor Kathleen B. Smith

Assistant Professor Robert L. Utley

In its broadest conception, the aim of the study of politics is to understand the way in which policy for a society is formulated and executed and to understand the moral standards by which policy is or ought to be set. This center of interest is often described alternatively as the study of power, of government, of the state, or of human relations in their political context. For teaching purposes, the study of politics has been divided by the department into the following fields: (1) American politics, (2) comparative politics, (3) political philosophy, and (4) international politics. Introductory courses in the first three of these fields provide broad and flexible approaches to studying political life.

The major in politics consists of thirty-six credits. The courses must include the following: (a) a first course selected from Politics 113, 114, or 115; (b) any one introductory or advanced course in each of the four fields of the discipline, restricted to non-seminar courses; (c) one seminar in politics (usually a student takes no more than one seminar in each field and no more than three seminars overall). A minimum grade average of C on all courses attempted in politics is required for graduation. Majors should consult with their advisers concerning additional regulations.

Highly qualified majors are invited by the department to apply for admission to the honors program in politics. To be graduated with the designation "Honors in Politics," one must successfully complete Politics 284 and 285. Politics 284 and 285

must be taken as additional courses beyond the thirty-six credits ordinarily required. For additional information members of the departmental faculty should be consulted.

The minor in politics requires five courses, ordinarily including Politics 113 but excluding Individual Study and seminar courses. Four of the five courses must be taken at Wake Forest and any transfer courses must be approved by the chairman. None of the five courses may be taken pass/fail.

A student who selects politics to fulfill the Division IV requirement must take one of the following courses: Politics 113, 114, or 115. No introductory level course is required for students taking a politics course as an elective unless such a prerequisite is specified in the course description.

Introductory Courses

A student may take any one of the following as the first course in the department; more than one may be taken. Ordinarily a student is expected to take Politics 113 as the first course.

113. Introduction to Politics: American Politics. (4) The nature of politics, political principles, and political institutions, with emphasis on their application to the United States.

114. Introduction to Politics: Comparative Politics. (4) Political processes and principles as applied to traditional, developing, and mature states.

115. Introduction to Politics: Political Theory. (4) Major systematic statements of the rules and principles of political life. Representative writers are Tocqueville, Dahl, and Aristotle.

American Politics

210. Public Policy Analysis. (4) Analysis of the substance of public problems and policy alternatives. Examination of why government pursues certain policies and the consequences of those policies.

211. Political Parties and Voting Behavior. (4) An examination of party competition, party organizations, the electorate and electoral activities of parties, and the responsibilities of parties for governing.

213. Public Administration. (4) Introduction to the study of public administration emphasizing policy-making in government agencies.

218. Congress and Policy-Making. (4) An examination of the composition, authority structures, external influences, and procedures of Congress with emphasis on their implications for policy-making in the United States.

220. The American Presidency. (4) Emphasis on the office and the role; contributions by contemporary presidents considered in perspective.

222. Urban Problems and Politics. (4) Political structures and processes in American cities and suburbs as they relate to the social, economic, and political problems of the metropolis.

225. American Constitutional Law: Separation of Powers and the Federal System.

(4) An analysis of Supreme Court decisions affecting the three branches of the national government and federal/state relations.

226. American Constitutional Law: Civil Liberties. (4) Judicial interpretations of First Amendment freedoms, racial equality, and the rights of the criminally accused.

227. Politics, Law, and the Legal Process. (4) Analysis of the nature and possible sources of law, the proper role of law in social change, structure and process in the legal system, and the impact of legally decided policies on society, including their propensity for justice and fairness in American democratic society.

Comparative Politics

231. Western European Politics. (4) Analysis of the political systems of Great Britain, France, and Italy, focusing primarily on the problems of stable democracy.

232. Government and Politics in the Soviet Union. (4) Analysis of the institutions and processes of politics in the USSR and examination of political developments in the other states of Eastern Europe.

233. The Politics of West and East Germany. (4) A study of the political behavior and governmental institutions of the capitalist democratic regime of West Germany and the authoritarian socialist regime of East Germany.

234. Government and Politics in East Asia. (4) An analysis of the political institutions and processes in China and Japan, with emphasis on the problem of modernization.

235. The Politics of Revolution. (4) The comparative study of revolution as a historical phenomenon and as an alternative means of change in the contemporary world. Analysis of the nature, the background and causes, the processes, the varieties, and the consequences of revolution, and an attempt to assess the capabilities or potential of some current movements purporting to be revolutionary. Some revolutions receiving particular attention are those of England, France, Russia, Mexico, Cuba, and China, and some broad movements included are the New Left and contemporary anarchism in the United States and Western Europe.

236. Government and Politics in Latin America. (4) Comparative analysis of the institutions and processes of politics in the Latin American region.

238. History, Culture, and Political Change. (4) The study of how major cultures articulate or symbolize their existence either in history or moving through history. Special attention given to an evaluation of current concepts applied to political change.

239. Comparative Bureaucratic Elites. (4) An investigation of the role of top civil servants in the decision-making process of industrialized political systems. The dilemma of bureaucratic power and democratic accountability explored in the political systems of the United States, West Germany, Great Britain, France, Italy, and one of the Scandinavian countries.

242. Problems in Comparative Politics. (4) An intensive study of one or more major problems in contemporary comparative politics.

245. Government and Politics of South Asia. (4) A study of the governments of India, Pakistan, Nepal, and Ceylon. Emphasis on political organizations, party structures, and subnational governmental systems.

International Politics

251. Fundamentals of International Politics. (4) Fundamental theoretical questions of international politics, with special emphasis on existing international patterns.

252. Current Problems in International Politics. (4) An intensive study of one or more major problems of contemporary international politics.

253. The Politics of International Economic Relations. (4) A study of the emergence of international economic transactions, including trade, monetary affairs, investment, and multinational corporations, as a central aspect of world politics.

254. American Foreign Policy: Contemporary Problems. (4) A critical examination of different methods of studying American foreign policy and of selected policies followed by the United States since the early 1960s.

255. American Foreign Policy: The Cold War Period. (4) A critical examination of the forces which shape American foreign policy and of selected policies followed from World War II to the Cuban Missile Crisis.

Political Philosophy

271. Plato, Aristotle, and Classical Political Philosophy. (4) An examination of the nature and goals of the classical position, with attention to its origins in ancient Athens and its diffusion through Rome. Representative writers are Plato, Aristotle, and Cicero.

272. Equality and Liberty. (4) The arguments for and against democracy and republicanism, majority rule, and the rights of man. Representative writers are Rousseau and Mill.

273. Radical Critiques of Political Society. (4) Anarchist, socialist, and communist criticisms of and alternatives to existing political societies, with special attention to such problems as utopianism and alienation. Representative writers are Marx and Nietzsche.

274. Noble Greeks and Romans. (4) A study of statesmanship in the speeches and actions of selected major figures. Theory manifested in practice. Representative writers are Shakespeare and Plutarch.

275. Theory of the American Polity. (4) Critical examination of the nature of the American polity as expressed by its founders and leading statesmen. Representative writers are the Federalists, Lincoln, and Wilson. Does not meet theory distribution requirement for majors.

276. Medieval Political Philosophy. (4) Philosophy and religion in cooperation and conflict. Emphasis on Christian writers with some attention to Muslim and Jewish. Representative writers are Aquinas, Dante, and Maimonides.

278. Foundations of Modern Political Philosophy. (4) An examination of the essential writings of thinkers who broke with the past in an attempt to establish a more "realistic" approach to the study of politics. Representative writers are Machiavelli, Hobbes, and Locke.



Honors and Individual Study

284. Honors Study. (2) Directed study and research in preparation for a major paper on a subject of special interest to the student. Taken in the fall semester of the senior year by all candidates for departmental honors.

285. Honors Study. (3) Directed study toward completion of the project begun in Politics 284 and to the writing and defense of an honors paper. Taken in the spring semester of the senior year by all candidates for departmental honors. P—Politics 284.

287. Individual Study. (2, 3, or 4) Internships, work/study projects, and other individual study programs.

Seminars

291. Seminar in American Politics. (4) Readings, research, and independent study on selected topics. P—Permission of instructor.

292. Seminar in Comparative Politics. (4) Readings, research, and independent study on selected topics. P—Permission of instructor.

293. Seminar in International Politics. (4) Readings, research, and independent study on selected topics. P—Permission of instructor.

294. Seminar in Political Philosophy. (4) Readings, research, and independent study on selected topics. P—Permission of instructor.

Psychology

John E. Williams, Chairman

Professors Robert C. Beck, Robert H. Dufort, Charles L. Richman

John E. Williams

Associate Professors David W. Catron, Philippe R. Falkenberg,

David Allen Hills

Assistant Professors Deborah L. Best, Jerry M. Burger, Maxine L. Clark,

Cecilia H. Solano

Adjunct Associate Professor Frank B. Wood

Visiting Assistant Professors C. Drew Edwards, Jean C. Seeman

Adjunct Instructors Catherine A. Jourdan, Sam T. Manoogian, David S. Stump

Psychology 151 is prerequisite to all courses of a higher number. Courses numbered below 151 do not count toward Division IV requirements or toward the major in psychology. Psychology 211, or special permission of the instructor, is prerequisite for all 300-level courses except 313, 335, 344, 358, and 367.

It is recommended that students who are considering psychology as a major take Psychology 151 in their freshman year and Psychology 211 in the fall of their sophomore year. An average of C or higher in psychology courses is required at the time the major is elected. The major in psychology requires the completion of a minimum of forty credits in psychology, including 151, 211, 212, and 313. In

addition, the major student must complete one course from each of the following groups: 320, 326, 329, and 333; 341, 351, 355, and 362. No more than forty-eight psychology credits may be counted toward the graduation requirements.

The minor in psychology requires twenty credits in psychology, distributed as follows: 151 (4 credits); 211 (5 credits); at least one of the following courses: 320, 326, 329, 333 (4 credits each); and seven additional credits in courses numbered 200 or above.

Highly qualified majors are invited by the department to participate in the honors program in psychology. To be graduated with the designation "Honors in Psychology," the student must complete satisfactorily a special sequence of courses (381, 383) and pass an oral or written examination. In addition, the honors student normally has a non-credit research apprenticeship with a faculty member. For more detailed information members of the departmental faculty should be consulted.

100. Learning to Learn. (2, 3 or 4) A workshop to help people improve their learning skills through the application of basic principles of learning, remembering, and so forth. Students at all levels welcomed. No prerequisite. Pass/Fail only.

102. Exploration of Career Planning. (2, 3 or 4) Examination of educational/vocational planning as a personal process, based on knowledge of self and the work world. No prerequisite.

151. Introductory Psychology. (4) A systematic survey of psychology as the scientific study of behavior. Prerequisite to all courses of a higher number.

211, 212. Research Methods in Psychology. (5, 5) Introduction to the design and statistical analysis of psychological research. Lab—twice weekly. P—Psychology 151.

239. Altered States of Consciousness. (4) Examination of altered states of consciousness with special reference to sleep and dreams, meditation, hypnosis, and drugs. P—Psychology 151.

241. Developmental Psychology. (4) Survey of physical, emotional, cognitive, and social development in humans from conception to death. P—Psychology 151.

245. Survey of Abnormal Behavior. (4) Study of problem behaviors such as depression, alcoholism, antisocial personality, the schizophrenias, and pathogenic personality patterns, with emphasis on causes, prevention, and the relationships of these disorders to normal lifestyles. P—Psychology 151.

250. Psychology Abroad. (4) The study of psychology in foreign countries. Content and travel plans vary from year to year depending upon interests of faculty and students. *Usually offered in summer.* P—Psychology 151.

255. Theories of Personality. (4) A comparative study of classical and contemporary theories of human personality. P—Psychology 151.

260. Social Psychology. (4) A survey of the field, including theories of social behavior, interpersonal attraction, attitudes and attitude change, and group behavior. P—Psychology 151.

265. Human Sexuality: A Changing Scene. (4) An exploration of the psychological

and physiological aspects of human sexuality, with attention to changing sexual mores, sexual deviances, sexual dysfunction, and sex-related roles. P—Psychology 151.

268. Psychology of Business and Industry. (4) Psychological principles and methods applied to problems commonly encountered in business and industry. P—Psychology 151.

270. Topics in Psychology. (1, 2, or 3) The student selects from among a group of short one-credit courses dealing with topics of special interest. The courses meet sequentially, not concurrently, and options are offered in each portion of the semester. P—Psychology 151.

270A *Aggression*

270D *Brain/Behavior Relations*

270E *Emotion*

270H *Intelligence*

270I *Race and Young Children*

270J *Memory*

270K *Psychology and Politics*

270L *Sex Stereotypes and Roles*

270M *The Gifted and Creative Person*

270N *Liking and Loving Relationships*

270P *Animal Flying Behavior*

280. Directed Study. (1–4) Student research performed under faculty supervision. P—Psychology 151 and approval of faculty member prior to registration.

313. History and Systems of Psychology. (4) The development of psychological thought and research from ancient Greece to present trends, with emphasis on intensive examination of original sources. P—Psychology 151.

320. Physiological Psychology. (4) Neurophysiological and neuroanatomical explanations of behavior. P—Psychology 211 or permission of instructor.

323. Animal Behavior. (4) A survey of laboratory and field research on animal behavior. This course may count as biology or psychology but not both; choice to be determined at registration. P—Permission of instructor.

326. Learning Theory and Research. (4) Survey of concepts and research in learning, with particular emphasis on recent developments. P—Psychology 211.

329. Perception. (4) Survey of theory and research findings on various sensory systems (vision, hearing, touch, taste). P—Psychology 211.

333. Motivation of Behavior. (4) Survey of basic motivational concepts and related evidence. P—Psychology 211.

335. Fundamentals of Human Motivation. (4) Description and analysis of some fundamental motivational phenomena, with special reference to human problems; includes reward and punishment, conflict anxiety, affection, needs for achievement and power, aggression, creativity, and curiosity. P—Psychology 151.

341. Research in Child Development. (4) Methodological issues and selected research in child development. Research projects required. P—Psychology 211.

342. Current Issues in Developmental Psychology. (4) Intensive examination of selected theoretical or research issues in this area. P—Psychology 211 and 241.

343. Developmental Disorders. (2) Delayed or distorted neural development stud-

ied in relation to major disturbances of learning and behavior in children and in the aging. P—Psychology 211.

344. Abnormal Psychology. (4) Descriptive analysis of the major types of abnormal behavior with attention to organic, psychological, and cultural causes and major modes of therapy. *Offered in the summer.* P—Psychology 151.

351. Personality Research. (4) The application of a variety of research procedures to the study of human personality. Research projects required. P—Psychology 211.

355. Research in Social Psychology. (4) Methodological issues and selected research in the study of the human as a social animal. Research projects required. P—Psychology 211.

358. Psychology of Woman. (4) Intensive study of the behavior of women and its personal application, including consideration of biological, social, and motivational factors. P—Psychology 151.

361. Operant Conditioning and Behavior Modification. (4) Principles, theory, and experimental research in operant learning, with applications to the modification of behavior in various populations and situations, P—Psychology 211.

362. Psychological Tests and Measurements. (4) Theory and application of psychological assessment procedures in the areas of intelligence, aptitude, vocational interest, and personality. P—Psychology 211.

363. Survey of Clinical Psychology. (4) An overview of the field of clinical psychology. P—Psychology 245 and senior standing or permission of instructor.

367. Effectiveness in Parent/Child Relations. (4) A survey of popular approaches to child-rearing, with examination of the research literature on parent/child interaction and actual training in parental skills. P—Psychology 151.

369. Contemporary Applications of Psychology. (4) Supervised field experience in applied psychology. P—Psychology 151 and permission of instructor.

378. Instrumentation for Psychological Research. (2–4) Lecture/demonstration presentation of electrical and mechanical equipment, followed by practical application in small group project work. Assumes no prior knowledge of electricity or construction. P—Permission of instructor.

381. Honors Seminar. (3) Seminar on selected problems in psychology. Intended primarily for students in the departmental honors program. P—Psychology 211 and permission of instructor.

383. Honors Research. (3) Seminar in selected issues in research design, followed by independent empirical research under the supervision of a member of the departmental faculty. P—Psychology 212 and permission of instructor.

392. Contemporary Problems in Psychology. (4) Seminar treatment of current theory and research in several “frontier” areas of psychology. Principally for senior majors planning to attend graduate school. P—Psychology 211 and senior standing.

Religion

Carlton T. Mitchell, Chairman

**Professors John William Angell, George McLeod Bryan, Robert Allen Dyer,
Emmett Willard Hamrick, Carlton T. Mitchell,**

Charles H. Talbert

Adjunct Professor Jerome R. Dollard

Associate Professors John E. Collins, Fred L. Horton Jr., Ralph C. Wood Jr.

Instructor Murdina D. MacDonald

Visiting Lecturers Thomas E. Dougherty Jr.

The department offers courses designed to give every student an opportunity to acquire at least an introduction to the life, literature, and most important movements in the field of religion. It also seeks to give the students preparing for specialized service as religious education directors, ministers, and missionaries the foundational courses needed for further study.

A course in religion is required for all degrees. Any course offered by the department is accepted to meet the requirement except for 218, 237, 240, 266, 270, 273, 282, 286, 287, 292, and 346.

A major in religion requires a minimum of thirty-two credits, at least half of which must be in courses above the 100 level.

A minor in religion requires five courses (twenty credits), two of which must be above the 100 level. The required courses may include one pass/fail course if the course is offered on the pass/fail basis only. The department will provide advisers for students electing the minor in religion.

Pre-ministerial students are advised to include in their program of study, in addition to courses in religion, courses in psychology, ancient history, public speaking, and two languages (Greek or Latin and German or French).

Highly qualified majors are invited by the department to apply for admission to the honors program in religion. To be graduated with the designation "Honors in Religion," they must apply to the chairman of the department for admission to the honors program, normally by February of the junior year. Upon completion of all the requirements the candidate is graduated with "Honors in Religion." For additional information members of the departmental faculty should be consulted.

111. Introduction to the Old Testament. (4) A survey of the Old Testament designed to introduce the student to the history, literature, and religion of the ancient Hebrews.

112. Introduction to the New Testament. (4) A survey of the literature of the New Testament in the context of early Christian history.

113. The Hebrew Prophets. (4) A study of the background, personal characteristics, function, message, contribution, and present significance of the Hebrew prophets.

114. The Wisdom Literature. (4) An introduction to the Wisdom Literature of the Old Testament, with special attention to Proverbs.

120. Introduction to the Bible. (4) A consideration of prominent themes found in the

Old and New Testaments. May be taken only by students who do not take Religion 111 or 112.

131. Basic Christian Ethics. (4) The Biblical and theological foundation of the Christian ethic and its expression in selected contemporary problems.

161. World Religions. (4) The place of religion in life and the origin, nature, and accomplishments of the living religions of the world, studied from the historical point of view.

164. History of Christianity. (4) A rapid survey of the history of the Christian Church.

166. American Religious Life. (4) A study of the history, organization, worship, and beliefs of American religious bodies, with particular attention to cultural factors.

171, 172. Meaning and Value in Western Thought. (4, 4) A critical survey of religion and philosophy in the Western world from antiquity to modern times. Either Religion 171 or 172 satisfies the philosophy or religion requirement; both 171 and 172 satisfy both the philosophy and religion requirements; choice determined at registration.

173. An Introduction to Christian Theology. (4) A study of the ground, structure, and content of Christian belief.

176. Theology and Modern Literature. (4) A study of modern literary artists whose themes are primarily theological, from Hopkins to Tolkien.

200. Myth. (4) A study of the approaches to the interpretation of myth, with a focus on the meaning and values implicit in the myths of contemporary culture.

201. Meaning of Religion. (4) A phenomenological study of different ways of defining religion, including views of representative philosophers, psychologists, sociologists, anthropologists, theologians, and historians of religion.

202. Religious Ecstasy. (4) A phenomenological study of religious ecstasy and of the methods by which it is obtained. Views of selected psychologists, sociologists, anthropologists, and historians of religion considered.

214. Introduction to Biblical Archeology. (4) A survey of the contributions of Near Eastern archeology to Biblical studies.

215. Visions of the End: Jewish and Christian Apocalyptic. (4) Reading and study of Biblical and non-Biblical apocalyptic texts.

217. The Old Testament Apocrypha. (4) Reading of the books of the Apocrypha, with special attention to their origin and significance, and with a consideration of the ambivalence of Judaism and Christianity toward this literature.

218. Seminar in the Mediterranean World. (4) Travel and study in such countries as Greece, Italy, Turkey, Egypt, Lebanon, Syria, and Israel.

224. Jesus and the Synoptic Gospels. (4) A study of Jesus' proclamation and activity in the light of modern critical research on the Gospels.

236. Church and Community. (4) An examination of the basic needs and trends of

the contemporary community, especially the rural and suburban, in the light of the Christian norms for "the good community."

237. Black Religion and Black Churches in America. (4) Survey of literature on these themes with an examination of the historical background and special attention to the contemporary area.

238. Religion and Science. (4) An analysis of the relationship between science and religion in world culture.

240. Principles of Religious Education. (4) A study of the theory and practice of religious education, with emphasis on the basic foundations in religion and education.

261. Judaism in the First Three Centuries of the Common Era. (4) A study of the development of Rabbinic Judaism out of the sects and movements of first century Judaism.

266. Religious Sects and Cults. (4) An examination of certain religious sects in America, including such groups as Jehovah's Witnesses, communal groups, and Black Muslims.

270. Walker Percy. (4) A theological examination of his novels and essays, his Southern stoic background, and his use of European existentialism.

273. Studies in Ecumenical Theology. (4) A study of various images and models of the church, their interrelationships and implication for ecumenism.

276. The Problem of Evil from Job to Shakespeare. (4) A comparative analysis of the source and remedy of evil in Job, Aeschylus, Sophocles, Plato, Dante, and Shakespeare.

277. Christian Literary Classics. (4) A study of Christian texts which are masterpieces of literature as well as faith, including works by Augustine, Dante, Pascal, Bunyan, Milton, and Newman.

282. Honors in Religion. (4) A conference course including directed reading and the writing of a research report.

286, 287. Directed Reading. (1-4, 1-4) A project in an area of study not otherwise available in the department, permitted upon departmental approval of a petition presented by a qualified student.

292. Teaching Religion. (4) A study of the teaching of religion in church, school, and community.

312. Poetic Literature of the Old Testament. (4) A study of Hebrew poetry, its types, its literary and rhetorical characteristics, and its significance in the faith of ancient Israel.

315, 316. Field Research in Biblical Archeology. (4, 4) A study of the religion and culture of the ancient Near East through the excavation and interpretation of an ancient site.

317. The Ancient Near East. (4) A comparative study of ancient Near Eastern

cultures and religions, with special emphasis on Israel's relationships with surrounding peoples.

321. The Quest for the Historical Jesus. (4) An investigation of the possibility and relevance of historical knowledge about Jesus through a consideration of the seminal "Lives of Jesus" since the eighteenth century.

322. The General Epistles. (4) An exegetical study of two or more of the general Epistles, with emphasis on the setting of the epistles in the life of the Early Church.

326. Early Christian Theologians: Paul. (4) An introduction to the Pauline interpretation of Christianity and its place in the life of the Early Church.

327. Early Christian Theologians: The Fourth Evangelist. (4) An examination of the Johannine interpretation of Jesus and Christian faith.

328. The New Testament and Ethics. (4) A study of selected ethical issues in the New Testament within the context of Mediterranean culture.

332. Religion and the Social Crisis. (4) An interdisciplinary approach to the study of society today, with particular attention to views of human nature and social institutions as reflected in religion, the social sciences, and related disciplines.

334. Christian Ethics and Contemporary Culture. (4) A study of the encounter between the Christian ethic and the value systems implicit in social areas such as economics, politics, race, and sex.

(a) *Bio-medical Decisions*

(b) *Feminist Theology*

346. Theological Foundations of Religious Education. (4) A study of theological methodology, theories of learning, and philosophies of education in terms of their implications for religious education.

350. Psychology of Religion. (4) An examination of the psychological elements in the origin, development, and expression of religious experience.

354. Religious Development of the Individual. (4) A study of growth and development through childhood and adolescence to adulthood, with emphasis on the role of the home and the church in religious education.

355. Theology of Pastoral Care and Counseling. (4) A study of the relationship between theology and the purpose, theories, and methods of pastoral care. P—Permission of instructor.

360. Hinduism. (4) A study of the fundamental features of the Hindu tradition.

361. Buddhism. (4) A study of the Buddhist tradition, its fundamental features, and its impact on the culture of Asia.

363. Hellenistic Religions. (4) Consideration of available source materials, questions of method, and bibliography related to such Hellenistic religions as the mysteries, Hellenistic Judaism, and Gnosticism.

364. Islam. (4) A study of the fundamental concepts of Islamic thought and the historical context of its development. Both the ancient and contemporary impact of the teachings of Islam considered.

- 365. History of Religions in America.** (4) A study of American religions from colonial times until the present.
- 368. The Church: Reformation and Counter-Reformation.** (4) A study of the origin and development of Reformation theology and ecclesiology.
- 373. History of Christian Thought.** (4) A study of the history of Christian thought, beginning with its Hebraic and Greek backgrounds and tracing its rise and development to modern times.
- 374. Contemporary Christian Thought.** (4) An examination of the major issues and personalities in modern theology.
- 376. The Origins of Existentialism.** (4) A study of the principal nineteenth century figures who form the background for twentieth century existentialism: Goethe, Kierkegaard, Nietzsche, Dostoevsky, and Tolstoy.

Hebrew

- 111, 112. Elementary Hebrew.** (4, 4) A course for beginners in the classical Hebrew of the Bible, with emphasis on the principles of Hebrew grammar and the reading of Biblical texts. Both semesters must be completed.
- 153. Intermediate Hebrew.** (4) Intensive work in Hebrew grammar and syntax based upon the readings of selected texts. Readings emphasize post-Biblical Hebrew. P—Hebrew 111, 112, or the equivalent.
- 211. Hebrew Literature.** (4) The reading and discussion of significant Biblical Hebrew texts. P—Hebrew 153.
- 212. Hebrew Literature II.** (4) The reading and discussion of significant Biblical and post-Biblical texts. *Offered on demand.* P—Hebrew 153.
- 301. Introduction to Semitic Linguistics.** (4) A study of the history and structure of four languages from the Hamito-Semitic family.

Romance Languages

Mary Frances Robinson, Chairman

Professor of Humanities Germaine Brée

Professors Shasta M. Bryant, John E. Parker Jr.,

Mary Frances Robinson, Richard L. Shoemaker, Anne S. Tillett

Associate Professors Doranne Fenoaltea, Kathleen Glenn, Milorad R. Margitić,

Gregorio C. Martín, Blanche C. Speer

Visiting Assistant Professors Julián Bueno, Candelas M. Newton

Lecturers Bianca Artom, Eva Marie Rodtwitt

Instructors Catherine Anne Beaudry, Bonnie M. Carey, Candide Carrasco,

Charles V. Ganelin, Ruben L. Gomez, David A. Petreman,

Anna-Vera Sullam (Venice), Byron R. Wells

The major in French requires a minimum of thirty-six credits, at least twenty-four of which must be in literature. French 219 and 221 or their equivalents are required;

History 321 and 322 are recommended. An average of at least C must be earned in all courses taken in the major.

The minor in French language and culture requires twenty credits in French above French 153. It includes French 219, 221, 224, or their equivalents. The minor in French literature requires twenty credits in French literature above French 153.

The major in Spanish requires a minimum of thirty-six credits, at least twenty of which are normally in the literature of Spain and Spanish America. Spanish 219 and 221 or their equivalents are required; Spanish 223 and 224 and eight credits chosen from 225, 226, and 227 are recommended. Spanish 181, 1829, and 187 may not count toward the major. An average of at least C must be earned in all courses taken in the major.

The minor in Spanish language and culture requires twenty credits in Spanish above Spanish 153. It includes 214 or 215 or 216, plus 219, 221, 223, and 224. The minor in Hispanic literature requires twenty credits in Spanish above Spanish 153. It includes 214 or 215 or 216, plus 225, 226, 227 and one additional advanced course in literature. For both Spanish minors, with departmental approval, equivalent courses may be selected from the programs in Salamanca or Bogota, and certain other substitutions may be made.

A joint major is offered in French and Spanish, consisting of fifty-six credits in the two languages and literatures, excluding elementary language. Required courses for this major are French 153x, 216, 217, 219, 221, and 224; Spanish 153x, either 215 or 216, 219, 221, either 223 or 224, and eight credits from 225 through 227. Equivalents may be substituted. An average of at least C must be earned in all courses taken in the major.

All majors are strongly urged to take advantage of the department's study abroad programs and to live for at least a semester at one of the foreign language residence centers at the Graylyn Estate.

Highly qualified majors are invited by the department to apply for admission to the honors program in French or Spanish. To be graduated with the designation "Honors in Romance Languages," a candidate must complete French or Spanish 280 and 281 and pass a comprehensive written and oral examination. The oral examination may be conducted, at least in part, in the major language. For additional information members of the departmental faculty should be consulted.

101. Self-Instructional Language. (4) A self-instructional language course covering the principles of grammar and pronunciation in one of the less commonly taught languages, such as Japanese, Swedish, Arabic, or Thai. Individual self-instruction in the language of the student's choice through the use of recorded material and textbooks. Admission by petition to the Foreign Language Placement Review Committee. Elective credit only; does not satisfy basic or divisional course requirements.

French

111, 112. Elementary French. (4, 4) A course for beginners, covering the principles of French grammar and emphasizing speaking, writing, and the reading of elementary texts. Lab required.

113. Intensive Elementary French. (5) A one-semester course covering the elements of grammar and skills presented in French 111, 112. Intended for students whose preparation for French 153 is inadequate. Not open to students who have received credit for French 112. Lab required.

153. Intermediate French. (5) A review of grammar and composition with practice in conversation. Reading of selected texts. Lab required. P—French 112, 113, or two years of high school French and placement.

153x. Intermediate French. (4) Open to students by placement or permission. Lab required.

164. A Classic in Comedy. (2–4) Participants plan and present a production of a French comedy. The play is rehearsed and performed in French; students are involved in all aspects of production. P—Permission of instructor.

181. Swiss French Civilization. (4) The course is designed to acquaint the student with the Swiss people and their civilization through living for a few weeks with families. Visits are made to points of cultural interest, historical, literary, and artistic. A journal and a paper describing in detail some aspect of Swiss French civilization, both in French, are required. *Usually offered in the summer.*

185. Paris, Cultural Center of France. (4) A study of Paris monuments on location to explore the development of the city as capital and cultural center of France. No prerequisites. *Usually offered in the summer.*

199. French Individual Study. (2–4) P—Permission of the department.

213. Masterpieces of French Literature I. (4) Reading of selected texts in French. Particular periods, genres, and authors may vary from section to section. Parallel reading and reports. Only one course in masterpieces may count toward the major or minor, but either may satisfy the basic or divisional requirement. P—French 153 or equivalent.

214. Masterpieces of French Literature II. (4) Reading of selected texts in French. Particular periods, genres, and authors may vary from section to section. Parallel reading and reports. Only one course in masterpieces may count toward the major or minor, but either may satisfy the basic or divisional requirement. P—French 153 or equivalent.

216. Survey of French Literature from the Middle Ages through the Eighteenth Century. (4) Study of selected texts, parallel reading, and study of trends and movements. P—French 153 or permission of instructor.

217. Survey of French Literature of the Nineteenth and Twentieth Centuries. (4) Study of selected texts, parallel reading, and study of trends and movements. P—French 153 or permission of instructor.

219. Composition and Review of Grammar. (4) A systematic review of the fundamental principles of comparative grammar, with practical training in writing idiomatic French. Required for major. P—French 153 or equivalent.

221. Conversation and Composition. (4) Practice in speaking and writing French,

stressing correctness of sentence structure, phonetics, pronunciation, fluency, and vocabulary for everyday situations. Required for major. Lab required. P—French 153 or equivalent.

224. French Civilization. (4) An introduction to French culture and its historical development. Emphasis on intellectual, artistic, political, social, and economic life of France. Taught in French. P—French 221 or permission of instructor.

227. History of French Civilization. (2) An introduction to the historical development of French culture, including consideration of its intellectual, artistic, and political heritage. Taught in French. P—French 221 or permission of instructor.

228. Contemporary France. (2) A study of present-day France, including aspects of geography and consideration of social, political, and educational factors in French life today. Taught in French. P—French 221 or permission of instructor.

229. Business French. (4) A study of French used in business procedures, emphasizing specialized vocabulary pertaining to business correspondence, corporate organization, banking, and governmental relations, with practice in translation and interpretations, oral and written. P—French 219 and 221 or permission of instructor.

231. Medieval French Literature. (2–4) A survey of French literature of the Middle Ages with cultural and political backgrounds. Selected masterpieces in original form and modern transcription. P—French 216 or 217 or permission of instructor.

233. Sixteenth Century French Literature. (4) The literature and thought of the Renaissance in France, with particular emphasis on the works of Rabelais, Montaigne, and the major poets of the age. P—French 216 or 217 or permission of instructor.

241. Seventeenth Century French Literature. (4) A study of the outstanding writers of the Classical Age. P—French 216 or 217 or permission of instructor.

242. Seminar in Seventeenth Century French Literature. (4) A study of selected topics of the period. Topics may vary from year to year. P—French 216 or 217 or permission of instructor.

251. Eighteenth Century French Literature. (2–4) A survey of French literature of the eighteenth century with cultural and political backgrounds. P—French 216 or 217 or permission of instructor.

252. Seminar in Eighteenth Century French Literature. (2–4) Study of selected topics of the period. Topics vary from year to year. P—French 216 or 217 or permission of instructor.

261. Nineteenth Century French Literature. (4) A study of French literature of the nineteenth century with cultural and political backgrounds. P—French 216 or 217 or permission of instructor.

262. Seminar in Nineteenth Century French Literature. (4) Study of selected topics of the period. Topics vary from year to year. P—French 216 or 217 or permission of instructor.

263. Trends in French Poetry. (4) A study of the development of the poetic genre

with analysis and interpretation of works from each period. P—French 216 or 217 or permission of instructor.

264. French Novel. (4) A broad survey of French prose fiction, with critical study of several masterpieces in the field. P—French 216 or 217 or permission of instructor.

265. French Drama. (4) A study of the chief trends in French dramatic art, with reading and discussion of representative plays. P—French 216 or 217 or permission of instructor.

271. Twentieth Century French Literature. (4) A study of general trends and representative works of the foremost prose writers, dramatists, and poets. P—French 216 or 217 or permission of instructor.

272. Seminar in Twentieth Century French Literature. (4) Study of selected topics of the period. Topics vary from year to year. P—French 216 or 217 or permission of instructor.

280. Directed Research. (2) Required for honors in French.

281. Directed Study. (3, 4) Extensive reading and/or research to meet individual needs. Required for departmental honors. P—Permission of the department.

371. Surrealism. (4) Origins, theories, evolution, and impact. This course examines the interconnections between Surrealist poetry and painting and the works of Breton, Eluard, and Aragon. Conducted in French. P—French 221 or equivalent.

372. Proust. (4) Study of substantial portions of Proust's *A la Recherche du temps perdu*, its themes, and their significance in historical and aesthetic context. Conducted in French. P—French 221 or equivalent.

373. French Images of America. (4) A study of French points of view through the reading of texts beginning with Tocqueville and ending with Michel Butor's *Mobile*. The course attempts to relate them to a variety of circumstances and influences, political, sociological, and cultural. Conducted in French. P—French 221 or equivalent.

Semester in France

The department sponsors a semester in France in Dijon, the site of a well established French university. Students go as group in the fall semester, accompanied by a departmental faculty member.

No particular major is required for eligibility. However, a student (1) should be of junior standing and (2) should have taken as prerequisite French 221 or its equivalent or at least one French course beyond the intermediate level.

Students are placed in language courses according to their level of ability in French, as ascertained by a test given at Dijon. Courses are taught by native French professors. The resident director supervises academic, residential, and extracurricular affairs and has general oversight of independent study projects.

2232. Advanced Oral and Written French. (2–4) Study of grammar, composition, pronunciation, and phonetics, with extensive practice in oral and written French.

2282. Contemporary France. (4) A study of present-day France, including aspects of geography and consideration of social, political, and educational factors in French life today.

2292. French Civilization. (2-4) An introduction to French culture and its historical development. Field trips to museums and to points of historical and cultural significance in Paris and in the French provinces.

2402. Independent Study. (2-4) One of several fields; scholar's journal and research paper. Supervision by the director of the semester in France and evaluation by the department for which credit is granted. Work may be supplemented by lectures on the subject given at the Université de Dijon Faculté des Lettres et Sciences Humaines.

2752. French Literature. (2) Topics in the novel, theatre, and poetry of France, largely of the period since 1850.

2762. Literary Pilgrimage. (2-4) Reading of selected French texts, with visits to sites having literary associations. A study of the relationship between milieux and works. Taught in French-speaking countries.

Art 2712. Studies in French Art. (2) Lectures and field trips in French painting, sculpture, and architecture, concentrating on the eighteenth and nineteenth centuries.

History 2262. The Golden Age of Burgundy. (2) Burgundian society, culture, and government in the reigns of Philip the Bold, John the Fearless, Philip the Good, and Charles the Rash, 1384-1477.

Spanish

111, 112. Elementary Spanish. (4, 4) A course for beginners covering grammar essentials and emphasizing speaking, writing, and the reading of elementary texts. Lab required.

113. Intensive Elementary Spanish. (5) A one-semester course covering the elements of grammar and skills presented in Spanish 111, 112. Intended for students whose preparation for Spanish 153 is inadequate or who have demonstrated proficiency in another language. Not open to students who have received credit for Spanish 112. Lab required.

153. Intermediate Spanish. (5) A review of grammar and composition with practice in conversation. Reading of selected texts. P—Spanish 112 or 113 or two years of high school Spanish or equivalent. Lab required.

153x. Intermediate Spanish. (4) Open by placement or permission. Lab required.

162. A Panorama of Drama. (2-4) A brief sampling of Spanish drama from its early period to the contemporary theatre, studying in Spanish representative works from each major period. Approximately six plays. The class selects one play to present in Spanish, with students having directing and acting responsibilities.

181. Colombia: Study Tour of Bucaramanga, Cali, and Medellín. (4) Travel in Colombia and residence in one of its major cities in homes of private families for a

period of three weeks. Students receive instruction in spoken Spanish and in Colombian literature and anthropology and political, social, or economic history. Does not count toward the major. *Usually offered in the summer.*

187. Culture and Language. (4) A study of Spanish culture and language, tailored to various levels of student ability. Taught only in the Spanish-speaking world. Does not count toward the major. *Usually offered in the summer.*

199. Individual Study. (2–4) P—Permission of the department.

214. Introduction to Hispanic Literature. (4) Selected readings in Spanish and Spanish American literature. Designed as a substitute for either Spanish 215 or 216. *Offered in the summer.* P—Spanish 153 or equivalent.

215. Major Spanish Writers. (4) Reading of selected texts. P—Spanish 153 or equivalent.

216. Major Spanish American Writers. (4) Reading of selected texts. P—Spanish 153 or equivalent.

219. Advanced Grammar and Composition. (4) A systematic review of the fundamental principles of comparative grammar, with practical training in writing idiomatic Spanish. Lab required. P—Spanish 153 or equivalent.

221. Conversation and Composition. (4) Practice in speaking and writing Spanish, stressing correctness of sentence structure, phonetics, pronunciation, fluency, and vocabulary of everyday situations. Lab required. P—Spanish 153 or equivalent.

223. Latin American Civilization. (4) The culture and its historical development; emphasis on intellectual, artistic, political, social, and economic life. P—Spanish 153 or 216.

224. Spanish Civilization. (4) The culture and its historical development; emphasis on intellectual, artistic, political, social, and economic life. P—Spanish 215 or 216.

225. Survey of Spanish Literature from the Middle Ages through the Seventeenth Century. (4) Extensive reading and study of trends and influences. P—Spanish 215 or 216.

226. Survey of Spanish Literature from the Eighteenth Century to the Present. (4) Extensive reading and study of trends and movements. P—Spanish 215 or 216.

227. Survey of Spanish American Literature. (4) Extensive reading and study of works from the colonial through the contemporary periods, with emphasis on the late nineteenth and twentieth centuries. P—Spanish 215 or 216.

229. Commercial, Official, and Social Correspondence. (4) Instruction in the special vocabularies, formats, and styles required in written and telegraphic communications. Students write in Spanish communications appropriate to each type of correspondence. P—Spanish 215 or permission of instructor.

234. Spanish Prose Fiction before Cervantes. (4) A study of the several types of prose fiction, such as the sentimental, chivalric, pastoral, Moorish, and picaresque novels, prior to 1605. P—Spanish 215 or 216.

- 241. Golden Age Drama.** (4) A study of the major dramatic works of Lope de Vega, Calderón de la Barca, Tirso de Molina, Ruiz de Alarcón, and others. P—Spanish 215 or 216.
- 243. Cervantes.** (4) Intensive study of the life and works of Cervantes, with special emphasis on the Quixote and the *novelas ejemplares*. P—Spanish 215 or 216.
- 244. Seminar in Cervantes.** (2–4) A study of special aspects of Cervantes' works, such as the *novelas ejemplares* and his dramatic works. P—Spanish 215 or 216.
- 252. Seminar in Hispanic Poetry.** (2–4) A study of selected topics, such as *gongorismo*, the *romancero*, and the Generation of 1927. P—Spanish 215 or 216.
- 261. Nineteenth Century Spanish Novel.** (4) A study of the novels of Valera, Pereda, Galdós, Pardo Bazan, Blasco Ibáñez, and their contemporaries. P—Spanish 215 or 216.
- 265. Spanish American Novel.** (4) A study of the novel in Spanish America from its beginning through the contemporary period. P—Spanish 215 or 216.
- 266. Seminar in Spanish American Novel.** (4) A study of one or more categories of Spanish American novels, such as romantic, *indianista*, realistic, *gauchesca*, and social protest. P—Spanish 215 or 216.
- 269. Nineteenth Century Spanish Drama.** (4) A study of the principal dramatic works from neoclassicism to the end of the century. P—Spanish 215 or 216.
- 271. Modern Spanish Drama.** (4) A study of the principal dramatic works from the end of the nineteenth century through the contemporary period. P—Spanish 215 or 216.
- 273. Modern Spanish Novel.** (4) A study of representative Spanish novels from the Generation of 1898 through the contemporary period. P—Spanish 215 or 216.
- 274. Seminar in Modern Spanish Literature.** (2–4) An analysis of selected works representative of such movements as *costumbrismo*, realism, naturalism, and the contemporary social novel. P—Spanish 215 or 216.
- 275. Special Topics.** (2–4) Selected special topics in Spanish or Spanish American literature, such as the Spanish *Romancero* or the contemporary Spanish American novel. Offered at irregular intervals.
- 280. Directed Research.** (2) Required for honors in Spanish.
- 281. Directed Study.** (3–4) Extensive reading and/or research, to meet individual needs. Required for departmental honors. P—Permission of the department.

Semester in Spain

The department offers a semester in Spain at Salamanca, the site of a well established Spanish university. Students go as a group in the spring semester accompanied by a professor from the College.

No particular major is required for eligibility. However, a student (1) should be of junior standing, (2) should have completed intermediate Spanish or its equivalent

and (3) should be approved by both the major department and the Department of Romance Languages. A course in Spanish conversation is also recommended.

1829. Introduction to Spain. (2-4) Familiarization with the Spanish people, Spanish culture, and daily life in Spain. Classes in conversational and idiomatic Spanish, excursions to points of historical and artistic interest, and lectures on selected topics.

2049. Spanish Phonetics and Phonology. (4) Theory and practical application of the elements involved in speaking correct Spanish.

2059. History of the Spanish Language. (4) Evolution and historical development of the Spanish language, including regional dialects and present-day variations in the spoken and written form.

2179. Intensive Spanish. (2) Intensive study and practice of the oral and written language.

2259. Survey of Spanish Literature from the Middle Ages through the Seventeenth Century. (4) Extensive reading and study of trends and influences.

2419. Spanish Literature of the Golden Age. (4) A survey of the most important authors and genres of the Golden Age, with particular emphasis on the novel and the drama.

2759. Contemporary Spanish Literature. (4) A study of general trends and representative works of selected prose writers, dramatists, and poets from the modern period.

Sociology 2029. Social-Political Structures of Present-Day Spain. (4) A study of the various social and political elements which affect the modern Spanish state.

History 2019. General History of Spain. (4) History of Spain from the pre-Roman period to the present day.

Art 2029. Spanish Art and Architecture. (4) A study of the development and uniqueness of Spanish art and architecture within the framework of Mediterranean and Western art in general.

Chinese

111, 112. Elementary Chinese. (4, 4) Emphasis on the development of listening and speaking skills in Mandarin. Brief introduction to the writing system. Basic sentence patterns covered. Lab required.

99. Individual Study. (2-4) P—Permission of the department.

Hindi

111, 112. Elementary Hindi. (4, 4) Attention given mainly to basic Hindi grammar, vocabulary building, simple composition, and conversation. Lab required.

53. Intermediate Hindi. (4) Advanced practice in Hindi composition and conversation and introduction to literary Hindi. Lab required. P—Hindi 111, 112, or the equivalent.

211. Hindi Literature. (4) Reading and translation of selected texts in prose and poetry and journalistic Hindi. Lab required. P—Hindi 153.

Italian

113. Elementary Italian. (5) Intensive course for beginners, emphasizing the structure of the language and oral practice. Recommended for students in the Venice program and for language majors. Lab required. Lecture—five hours. *Offered every semester.*

153. Intermediate Italian. (5) Continuation of 113, with emphasis on reading and speaking. Lab required. Lecture—five hours. P—Italian 113 or two years of high school Italian.

153x. Intermediate Italian. (4) Open by placement or permission. Lab required.

199. Individual Study. (2–4) P—Permission of instructor.

215. Introduction to Italian Literature I. (4) Reading of selected texts in Italian. Satisfies basic requirement in foreign language. *Offered in the spring.* P—Italian 153 or equivalent.

216. Introduction to Italian Literature II. (4) May alternate with 215. Satisfies basic requirement in foreign language. P—Italian 153 or equivalent.

Semester in Venice

2213. Spoken Italian. (4) Course in oral Italian, offered only in Venice. Students are placed in small groups according to their levels of fluency. Elective credit.

Norwegian

190, 191. Norwegian. (4, 4) Independent study of the language and directed reading of texts in Norwegian. Primarily for students specializing in foreign languages.

Russian

111, 112. Elementary Russian. (4, 4) The essentials of Russian grammar, conversational drill, and reading of elementary texts. Lab required. P—Permission of instructor.

153. Intermediate Russian. (5) Training in principles of translation with grammar review and conversation practice. Lab required. P—Russian 112 or equivalent.

153x. Intermediate Russian. (4) Open by placement or permission. Lab required.

215. Introduction to Russian Literature. (4) Reading of edited texts from the nineteenth century. P—Russian 153 or equivalent.

216. Introduction to Russian Literature. (4) Reading of edited texts from the twentieth century. P—Russian 153 or equivalent.

217. Seminar in Nineteenth Century Russian Literature. (4) A study of the foremost writers, with reading of representative works. P—Russian 153 or equivalent.

218. Seminar in Contemporary Russian Literature. (4) Reading of representative works in Russian with discussion of political and cultural backgrounds. P—Russian 153 or equivalent.

Sociology

Philip J. Perricone, Chairman

Professor John R. Earle

Associate Professors William H. Gulley, Philip J. Perricone

Assistant Professors Catherine T. Harris, Willie Pearson Jr.

Instructor H. Kenneth Bechtel

A major in sociology requires thirty-six credits and must include Sociology 151, 371, and 372. A minimum average of 2.0 in sociology courses is required at the time the major is declared. A minimum grade point average of 2.0 in all sociology courses is required for graduation.

A minor in sociology requires twenty credits and must include Sociology 151 and Sociology 371. A minimum grade point average of 2.0 in sociology courses is required at the time the minor is declared. A minimum grade point average of 2.0 in sociology courses is required for certification as a minor. Students who intend to pursue a sociology minor are encouraged to notify the department early in their junior year, and they are invited to participate in all departmental functions.

To be graduated with the designation "Honors in Sociology," highly qualified majors are invited to apply to the department for admission to the honors program. They must complete a senior research project, document their research, and satisfactorily defend their work in an oral examination. For additional information members of the departmental faculty should be consulted.

151. Principles of Sociology. (4) General introduction to the field; social organization and disorganization, socialization, culture, social change, and other aspects.

152. Social Problems. (4) Survey of contemporary American social problems. P—Sociology 151.

105. Photography in the Social Sciences. (4) Explores the use of photography as a research technique for the social sciences; camera and darkroom instruction included. P—Permission of instructor.

148. Marriage and the Family. (4) The social basis of the family, emphasizing the problems growing out of modern conditions and social change.

01. Religion as a Social Institution. (4) A study of the various forms of religion, such as denomination, cult, sect. The relationship between religious factors and other social factors. Civil religion and religiosity in the U.S. P—Sociology 151.

02. Bureaucracy and Society. (4) The sociological analysis of complex organizations focusing on bureaucracy, power, authority, decision making and change. Attention will be given to business as well as government and other non-profit organizations. —Sociology 151.

05. Male and Female Roles in Society. (4) Changing male and female roles in the

context of societal institutions and sociological theories that explain such changes. Consideration of feminism as a social movement and of consequences of changing roles for human interaction. P—Sociology 151.

309. Sex and Human Relationships. (2) Study of the societal forces that impinge on human sexual behavior, emphasizing the effects of social change, the implications of changing gender roles, crosscultural and subcultural variations, and the influence of the mass media. P—Sociology 151 or permission of instructor.

310. Death and Dying. (2) Study of some of the basic issues and problems of modern man in accepting and facing death. P—Sociology 151 or permission of instructor.

311. Women in Professions. (4) Emphasis on the status of women in professional occupations (e.g., law, medicine, science, business, etc.) in socio-historical perspective. P—Sociology 151.

325. Self and Society: An Interactionist Perspective. (4) An analysis of the effects of social relationships upon self-development, self-presentation, and the learning of social roles and norms, with special emphasis on language and symbolic interaction. P—Sociology 151.

333. The Urban Community. (4) A survey of materials relating to the community as a unit of sociological investigation, with emphasis on the urban setting. Of particular value for social work or community planning. P—Sociology 151 or permission of instructor.

334. Society and Higher Education. (4) An analysis of the social forces that shape educational policies in the U.S. Assessment of significant contemporary writings on the manifest and latent functions of education. P—Sociology 151.

335. Medical Sociology. (4) Analysis of the social variables associated with health and illness and with the practice of medicine. P—Sociology 151.

337. Aging in Modern Society. (4) Basic social problems and processes of aging. Social and psychological issues discussed. Course requirements will include field placement in a nursing home or similar institution. P—Sociology 151 and permission of instructor.

339. Sociology of Violence. (4) A survey of the social factors associated with individual and collective violence. Discussion will focus on the contemporary and historical conditions which have contributed to various patterns of violence in American society. P—Sociology 151.

340. Sociology of Child Development. (4) Socialization through adolescence in the light of contemporary behavioral science, emphasizing the significance of social structure. P—Sociology 151.

341. Criminology. (4) Crime, its nature, causes, consequences, methods of treatment, and prevention. P—Sociology 151.

342. Juvenile Delinquency. (4) The nature and extent of juvenile delinquency; an examination of prevention, control, and treatment programs. P—Sociology 151 and permission of instructor.

- 343. Sociology of Law.** (4) Consideration will be given to a variety of special issues: conditions under which laws develop and change, relationships between the legal and political system, the impact of social class and stratification upon the legal order. P—Sociology 151 or permission of instructor.
- 344. The Sociology of Deviant Behavior.** (4) A sociological analysis of the nature and causes of and societal reaction to deviant behavior patterns such as mental illness, suicide, drug and alcohol addiction, sexual deviation, and criminal behavior. P—Sociology 151.
- 345. The Police and Society.** (4) A study of the position and role of the police in modern society. Examination of the nature of social control in human societies, the role of the police in social control, the police in France, England, and the United States. P—Sociology 151.
- 346. Seminar on Social Utopias.** (4) Survey of major utopian literature; emphasis is placed upon both the social organization in utopian proposals and their implicit critique of current society and social ideologies. P—Sociology 151.
- 347. Society, Culture, and Sport.** (4) An examination of the interrelationship of sport and other social institutions. Emphasis on the study of both the structure of sport and the functions of sport for society. P—Sociology 151.
- 348. Sociology of the Family.** (4) The family as a field of sociological study. Assessment of significant historical and contemporary writings. An analysis of the structure, organization, and function of the family in America. P—Sociology 151.
- 349. Sociology of Science.** (4) Emphasis on the origins and growth of science in socio-historical perspective, reciprocal relations between science and society in the twentieth century, science as a social system. P—Sociology 151 or permission of instructor.
- 350. Mass Communications and Public Opinion.** (4) The study of the increasing importance of collective behavior, emphasizing the relationship between the media and a changing society. P—Sociology 151.
- 358. Population and Society.** (4) Techniques used in the study of population data. Reciprocal relationship of social and demographic variables. P—Sociology 151.
- 359. Race and Ethnic Relations.** (4) Racial and ethnic group prejudice and discrimination and their effect on social relationships. Emphasis on psychological and sociological theories of prejudice. P—Sociology 151.
- 360. Social Stratification.** (4) The study of structured social inequality with a particular emphasis on economic class, social status, and political power. P—Sociology 151.
- 361. Sociology of the Black Experience.** (4) A survey and an analysis of contemporary writings on the status of Black Americans in various American social institutions (e.g., education, sport, entertainment, science, politics, etc.) P—Sociology 151.

365. Dependency Needs and Social Services. (4) Examination of various forms of dependency, such as social, economic, emotional, and physical, and community social agencies designed to meet these needs. Use of relevant literature, field experience, and resource persons.

371, 372. The Sociological Perspective. (4.4) A two-semester course dealing with the development and application of major theories and research methods in sociology. A continuing effort is made to enable the student to deal with current theoretically oriented research. P—Sociology 151 and permission of instructor.

380. Social Statistics. (4) Basic statistics, emphasizing application in survey research. (A student who receives credit for this course may not also receive credit for Biology 348, Business 201, Mathematics 157, or Anthropology 380. A sociology major may take Anthropology 380 in lieu of Sociology 380 to meet major requirements.)

385, 386. Special Problems Seminar. (4) Intensive investigation of current scientific research within the discipline which concentrates on problems of contemporary interest. P—Permission of instructor.

398, 399. Individual Study. (1–4, 1–4) Reading research, or internship courses designed to meet the needs and interests of selected students, to be carried out under the supervision of a departmental faculty member.

Speech Communication and Theatre Arts

Donald H. Wolfe, Chairman

Professors Julian C. Burroughs Jr., Franklin R. Shirley, Harold C. Tedford

Associate Professors Michael D. Hazen, Donald H. Wolfe

Visiting Assistant Professor Jo Whitten May

Instructors Caroline S. Fullerton, Mae Jean Go, Allan D. Loudon

Visiting Lecturer James H. Dodding

Lecturers John Steele, Mary R. Wayne

For convenience in advising majors, the department divides the study of speech communication and theatre arts into the following fields: (1) communication/public address, (2) radio/television/film, (3) theatre arts, and (4) speech pathology/correction. It is possible for a student either to concentrate in one of the first three fields or to take courses across the breadth of the discipline. Specific courses of study for both majors and minors are worked out in consultation with departmental faculty members.

A major in speech communication and theatre arts consists of a minimum of forty credits, at least eight of which must be at the 300 level. In order for a course to count toward a student's major, the student must earn a grade of C or higher in the course.

A minor in the first three fields listed in the first paragraph above requires six courses for a minimum of twenty-four credits, at least eight of which must be at the 300 level.

Those students majoring in speech education and theatre arts education are

expected to take specific courses which meet the requirements for teacher certification. Information concerning the courses may be obtained from departmental faculty members.

Highly qualified majors are invited by the department to apply for admission to the honors program in speech communication and theatre arts. To be graduated with the designation "Honors in Speech Communication and Theatre Arts," they must successfully complete 281. For additional information members of the departmental faculty should be consulted.



280. Special Seminar. (2-4) The intensive study of selected topics in communication. Topics may be drawn from any theory or concept area of communication, such as persuasion, organizational communication, film, or theatre.

281. Honors in Speech Communication and Theatre Arts. (4) A conference course involving intensive work in the area of special interest for selected seniors who wish to graduate with departmental honors.

282. Individual Study. (2-4) Special research and readings in a choice of interest to be approved and supervised by a faculty adviser.

283, 284. Debate, Radio/Television/Film, or Theatre Arts Practicum. (2, 2) Individual projects in the student's choice of debate, radio/television/film, or theatre arts. Includes organizational meetings, faculty supervision, and faculty evaluation. No student may register for more than two credits of practicum in any semester. No student is allowed to take more than a total of eight credit units in practicum, only four credits of which may be counted toward a major in speech communication and theatre arts. Pass/Fail only.

Communication/Public Address

151. Public Speaking I. (4) A study of the nature and fundamentals of speech communication. Practice in the preparation and delivery of short speeches.

152. Public Speaking II. (4) The preparation and presentation of short speeches to inform, convince, actuate, and entertain. P—Speech Communication 151.

153. Interpersonal Communication. (4) The course is divided into three parts: communication theory, person-to-person communication, and small group interaction.

155. Group Communication. (4) An introduction to the principles of discussion and deliberation in small groups, with practice in group problem-solving and discussion leadership.

156. Oral Interpretation of Literature. (4) Fundamentals of reading aloud, with emphasis on selection, analysis, and performance.

161. Voice and Diction. (4) A study of the principles of voice and production, with emphasis on phonetics as a basis for correct sound formation.

251. Persuasion. (4) A study of the variables and contexts of persuasion in contemporary society.

252. Argumentation and Debate. (4) A study of the principles of argumentation and practical experience in researching and debating a public policy question.

253. The Rhetoric of Western Thought. (4) A survey of the major theories in rhetoric from Plato to Burke, with emphasis on rhetorical criticism. Students apply the historical/critical method to the rhetoric of contemporary movements.

261. Clinical Management of Speech and Language Disorders. (4) Methods used to correct speech disorders of voice, rhythm, language, and articulation; observation of

methods used with selected cases in clinical or public school settings. *Offered in alternate fall semesters.*

62. Audiology. (4) Clinical audiology, including anatomy, physiology, disorders of the hearing mechanism, and interpretations of basic measurements of auditory function. *Offered in alternate spring semesters.*

63. Speech and Language Disorders I. (4) Study of the disorders of language, articulation, and rhythm, with special emphasis on functional disorders; focus is on the role the therapist plays in assisting the speech-handicapped child. *Offered in alternate fall semesters.*

64. Speech and Language Disorders II. (4) Consideration of etiology and symptoms of speech and language problems due to organic disorders of voice, articulation, language, and hearing. *Offered in alternate spring semesters.*

71. Communication Theory. (4) An introduction to theory-building in communication and to the major contemporary theorists in the field. P—Speech Communication 51 or permission of instructor.

80. Special Seminar. (2–4) (See previous description.)

81. Honors Course. (4) (See previous description.)

82. Individual Study. (2–4) (See previous description.)

83, 284. Debate Practicum. (2, 2) (See previous description.)

53. British Public Address. (4) A historical and critical survey of leading British speakers and their speeches from the sixteenth century to the present.

54. American Public Address. (4) The history and criticism of American public address from colonial times to the present.

355. Directing the Forensic Program. (2, 4) A pragmatic study of the methods of directing high school and college forensics with work in the High School Debate Workshop. *Offered in the summer.*

56. The Rhetoric of Race Relations. (4) A study of race relations in America as reflected in the rhetoric of selected black and white speakers. Students apply the historical/critical method in exploring the effects of discourse on attempts at interracial communication.

57. The Rhetoric of the Women's Movement. (4) A study of selected women activists and the impact of their speeches and arguments from the 1800s to the present. Emphasis on the "New Feminist Movement."

71. Research in Communication. (4) An introduction to design and statistical procedures for research in communication.

72. A Survey of Organizational Communication. (3, 4) An introduction to the role of communication in organizations, with emphasis on field applications.

74. Mass Communication Theory. (3, 4) Theoretical approaches to the role of communication in reaching mass audiences and its relationship to other levels of communication. *Offered in alternate years.*

375. Communication and Conflict. (4) A study of communication in conflict situations on the interpersonal and societal levels. *Offered in alternate years.* P—Speech Communication 153 or permission of instructor.

376. Small Group Communication Theory. (4) Advanced study of the principles of small group interaction and discussion leadership. P—Speech Communication 153 or permission of instructor.

378. Semantics and Language Behavior. (4) A study of the syntactic and semantic aspects of communicative messages.

Radio/Television/Film

141. Radio-TV Speech. (2) An introduction to announcing and performing on radio and television.

241. Introduction to Broadcasting. (4) A study of the historical, legal, economic, and social aspects of broadcasting.

242. Radio Production. (2) A study of the basic elements of radio production.

243. TV Production. (2) A study of the basic elements of television production.

245. Introduction to Film. (4) Historical introduction to motion pictures through the study of various kinds of films and their relationship to society.

246. Film Production. (2) A study of the basic elements of motion picture production.

280. Special Seminar. (2–4) (See previous description.)

281. Honors Course. (4) (See previous description.)

282. Individual Study. (2–4) (See previous description.)

283, 284. Radio/Television/Film Practicum. (2, 2) (See previous description.)

342. Seminar in Radio/Television. (3 or 4) Extensive readings in and discussion of fundamental theory and current issues in radio and television. *Offered in spring, 1982.* P—Speech Communication 241.

344. Advanced Radio Production. (2) Study of advanced radio forms: documentary and drama. P—Speech Communication 242.

345. Advanced TV Production. (2) Individual production of complex forms of television such as documentary and drama. P—Speech Communication 243.

346. Film Criticism. (3 or 4) A study of film aesthetics through an analysis of the work of selected film makers and film critics. *Offered in spring, 1983.* P—Speech Communication 245.

348. Advanced Film Production. (2) Individual production of complex films such as drama, animation, and documentary. P—Speech Communication 246.

Theatre Arts

121. Introduction to the Theatre. (4) A survey of all areas of theatre art. Experience in laboratory and University Theatre productions. May be used to satisfy a requirement in Division I. Lab—three hours.

122. Technical Theatre I. (2) An introductory course in the technical aspects of theatrical production focusing upon the basic techniques of scenic construction, costume construction, make-up, and sound. This course is of special interest to potential majors. *Offered fall semesters only.* P—Theatre Arts 121.

123. Technical Theatre II. (2) An introductory course in the technical aspects of theatrical production focusing upon the basic techniques of mechanical drawing, stage lighting, scene painting, and props. This course is of special interest to potential majors. *Offered spring semesters only.* P—Theatre Arts 122.

124. Drafting for the Theatre. (2) The techniques and terminology used in making working and construction blueprints for theatrical use. P—Theatre Arts 122 and 123.

125. Basic Theatrical Lighting. (2) A study of theory and practice of stage lighting. P—Theatre Arts 122 and 123.

126. Stage Makeup. (2) A study of the theories, materials, and techniques of theatrical makeup. P—Theatre Arts 122 and 123.

127. Costume Construction. (2) An introduction to fundamental drafting, cutting, and construction techniques of period theatrical costumes. P—Theatre Arts 122 and 123.

221. Mime. (4) An introductory study of basic mime forms. The student will gain skills and understanding of this theatrical form through practical exercises, readings, rehearsals, and performances.

223. Stagecraft. (4) A study of the basic elements of theatre technology. Practical experience gained in laboratory and University Theatre productions. Open to freshmen and sophomores by permission of instructor. Lab—five hours.

226. Theories of Acting. (4) A study of acting theories and fundamental acting techniques. Open to freshmen and sophomores by permission of instructor. Lab—two hours.

227. Theatre Speech. (4) An intensive course in the analysis and correlation of the physiological, physical, and interpretive aspects of voice and diction on the stage.

228. The Contemporary English Theatre. (2,3, or 4) An examination of the English theatre through reading, lectures, seminars, and attendance at numerous live theatre performances. The participants are expected to submit written reactions to the plays which are seen. Ample time to allow visits to museums, libraries, and historic places. *Taught in London.* P—Permission of instructor.

280. Special Seminar. (4) (See previous description.)

281. Honors Course. (4) (See previous description.)

282. Individual Study. (4) (See previous description.)

283, 284. Theatre Arts Practicum. (2, 2) (See previous description.)

3110. The English Theatre, 1660–1940. (4) A study of the major developments in the English theatre from the Restoration to World War II, including the plays, playwrights, actors, audiences, theatre architecture, theatre management, costumes, and sets. Field trips include visits to theatres, museums, and performances. *Offered in London.*

317. Theatrical Lighting Design. (4) The intensive study of the tools and aesthetics of the designer's craft with practical experience in designing for proscenium, thrust, and arena staging. P—Theatre Arts 125.

318. Theatrical Special Effects. (4) A survey of the various special scenographic and lighting effects used in modern theatre. Special emphasis will be placed on effects used in productions done during the term. P—Theatre Arts 223 and 125.

319. Costume: History and Design. (4) A study of the evolution of costume through the ages and the design of historic costume for the stage. P—Theatre Arts 121.

320. Theatrical Scene Design. (4) A study of the theories and styles of stage design and their application to the complete play. P—Theatre Arts 121 and 223 or permission of instructor.

321. Play Directing. (4) An introduction to the theory and practice of play directing. A grade is not granted for this course until the student has completed Theatre Arts 322. Lab—two hours. P—Theatre Arts 121 and 226 or permission of instructor.

322. Play Production Laboratory. (2) A laboratory in the organization, the techniques, and the problems encountered in a dramatic production. The production of a play for public performance required. P—Theatre Arts 321.

323. Period and Style in Acting. (4) A study of social customs, movement, dances, and theatrical styles relating to the performance of drama in historical settings as well as in period plays. The course includes performances in class. P—Theatre Arts 226.

324. Advanced Mime. (4) This course enlarges upon skills and techniques acquired in Theatre Arts 221 (Mime), with the addition of other mime forms. The course includes exercises, rehearsals, and performances. P—Theatre Arts 221.

325. Advanced Acting. (4) A concentrated study of the actor's art through theory and practice. P—Theatre Arts 226 or permission of instructor.

326. Performance Techniques. (4) A course in advanced acting techniques, focusing on acting styles appropriate to various modes of theatrical production. Specialized techniques such as dance, singing, stage combat, etc., may also be included. P—Theatre Arts 226.

327. Theatre History I. (4) A survey of the development of the theatre from its origins to 1870; includes lectures, readings, and reports.

328. Theatre History II. (4) A survey of the development of the modern theatre from 1870 to the present day; includes lectures, readings, and reports.

329. Advanced Theatre Speech. (4) Specific study in the theory and personal development of vocal melody, rhythm, color, and harmony according to the form, style, and mood of a theatrical production. P—Theatre Arts 227 or permission of instructor.

3300. Modern British and Continental Drama. (4) An examination of the works of major British playwrights of the modern period (from approximately 1875 to the present) to include, among others, Shaw, Galsworthy, Osborne, Shaffer, Stoppard, and Bond. At the same time, participants will study plays by major continental writers of the same periods, including Ibsen, Chekhov, Pirandello, Weiss, Handke, etc. Whenever possible, the class will attend performances of relevant plays. *Taught in London.*

3310. A Survey of English Theatre History. (4) Beginning with the Elizabethan period and continuing through the Restoration, the eighteenth century, the nineteenth century and into the twentieth century, this course will focus on the major periods of English theatrical activities, relevant personalities, and representative dramas. Field trips, museums, and performances will be part of the study of this course. *Taught in London.*

School of Business and Accountancy

Thomas C. Taylor, Dean

Professors Delmer P. Hylton, Jeanne Owen

Associate Professors Leon P. Cook Jr., Arun P. Dewasthali, Stephen Ewing

Thomas C. Taylor

Assistant Professors A. Sayeste Daser, Ralph B. Tower

Lecturer Glenn L. Clark Jr.

Instructors John D. Royster, Olive S. Thomas

Objectives

The School of Business and Accountancy recognizes the strong liberal arts tradition of Wake Forest University. In conjunction with that recognition, the curriculum for the study of business is designed to provide a general business education rather than one of specialization in a particular functional area.

The School of Business and Accountancy provides an opportunity for the student to study accountancy and the principal disciplines of business so that an understanding of the significant concepts, methods, and issues of business activity, including the international dimension, may be achieved. Thus, through the curricula in business and accountancy, the School aims to prepare its graduates for careers in the business world.

The business program seeks to equip the student with key tools and knowledge which should enable the graduate to perform effectively at the entry level and to advance to more responsible positions in business management. The accounting program is structured so that the graduate is prepared for positions in public accounting, industrial accounting, and accounting in non-profit organizations. A

primary objective of the accounting program is to enable the student to prepare for the professional CPA Examination.

Admission

Admission to the School is by formal application, and applicants will be screened by the Admissions Committee of the School of Business and Accountancy. Before being considered for admission to the School of Business and Accountancy, the applicant first must have been admitted to Wake Forest College.

Minimum requirements for admission to the School of Business and Accountancy are completion of sixty-five credits, a grade point ratio of 2.0 on all courses attempted, and satisfactory completion of two semesters of Principles of Accounting and two semesters of Principles of Economics. The student also should have completed Mathematics 108 or 111.

The number of students who can be accommodated is limited. Therefore, the School of Business and Accountancy reserves the right to grant or to deny admission or readmission to any student who meets the minimum requirements. Readmission to the School of Business and Accountancy first requires readmission to Wake Forest College, requirements for which are discussed on page 39.

Transfer of Credit from Other Schools

It is expected that all work toward degrees offered by the School of Business and Accountancy will be taken in this school. Any exceptions must be approved by the Dean of the School of Business and Accountancy. For students wishing to transfer credit from other schools, the following general guidelines apply:

- (a) Courses at another school passed with the minimum passing grade at that school may not be transferred.
- (b) Courses transferred in business and accountancy are subject to validating examinations.
- (c) No work in courses numbered 150 and above will be accepted from two-year schools.
- (d) Courses taken elsewhere in subjects not offered in the School of Business and Accountancy may not be counted toward the credits required in the School of Business and Accountancy.

For the B.S. in business, a minimum of forty-one credits must be earned in the School of Business and Accountancy at Wake Forest University; for the B.S. in accountancy, the minimum credits required in this school total fifty-four.

Requirements for Continuation

To continue the program, a student must be academically responsible and must show satisfactory progress towards completing the requirements for the degree. Students are responsible for knowing their academic status and whether they are meeting the minimum academic requirements for continuation in the School of Business and Accountancy. The Dean of the School of Business and Accountancy will notify the student if these requirements are violated and will decide if the student may continue.

Requirements for Graduation

The School of Business and Accountancy confers the Bachelor of Science degree with majors in accountancy and business. For the major in business, a student must complete the following course work:

Accounting 111 and 112; Business 201, 202, 203, 211, 221, 231, 251, 261, and 271; Economics 151 and 152; Mathematics 108 or 111; Speech 151 or 153 or 155; and a minimum of eight credits from Business 212, 213, 214, 222, 223, 224, 225, 232, 233, 234, or any courses in Accounting above 112.

For the major in accountancy, the following course work must be completed: Accounting 111, 112, 151, 152, 252, 253, 261, 271, and 273; Business 201, 203, 211, 221, 231, 261, and 271; Economics 151 and 152; Mathematics 108 or 111; and Speech 151 or 153 or 155.

In addition to the courses stipulated above, the student in business and accountancy must also meet the following requirements for graduation:

- (a) a minimum of 144 credits, including the basic and divisional requirements established by Wake Forest College;
- (b) a minimum grade point average of 2.0 on all work attempted at Wake Forest; and
- (c) an overall 2.0 quality point average on all business and accountancy courses, exclusive of courses repeated with a C grade or better.

Senior Honors Program

Students with a grade point average of at least 3.0 on all college work and 3.3 on all work in business and accountancy are invited to apply for admission to the honors program in business and accountancy. A project, paper, or readings, and an oral examination are required. Those who successfully complete the requirements specified by the School are graduated with the designation "Honors in Business" or "Honors in Accountancy." For additional information interested students should consult a member of the faculty of the School of Business and Accountancy.

Courses of Instruction

Business

201. Business Statistics. (4) Techniques of analysis of numerical data, including descriptive statistics, sampling theory, statistical inference, correlation and regression, and non-parametric statistics.

202. Quantitative Analysis. (4) Development and understanding of quantitative decision tools and models to be applied to the managerial decision process. Models include linear programming (graphic, algebraic, and simplex solutions; sensitivity analysis; duality; transportation and assignment algorithm); decision theory; PERT/CPM; and queuing. P—Business 201.

203. Production Management. (4) A study of the problems of systems design and resource allocation within the firm. Topics include process and job designs; facilities

location and layout; forecasting; aggregate planning; materials requirements planning; scheduling; quality control; and inventory model. P—Business 211 and either Business 202 or Accounting 252.

211. Organizational Theory and Behavior. (4) The study of macro and micro organizational design — structure, processes, development, climate, behavior, and performance evaluations. P—Junior standing.

212. Advanced Management of Organizational Behavior. (4) Advanced management of problems of behavior and communication—organizational and interpersonal. A comparative multinational perspective and experiential approach, developing problem-solving processes for management of human resources. P—Business 211.

213. History of Management Thought. (4) A study of past and present contribution to the art of management — forces and institutions which control and influence the exercise of managerial activities through time. Ethical and philosophical issues are included. P—Business 211.

214. Labor Policy. (4) A study of selected topics in labor-management relations in both the business and the public sector from the view of labor, management, and the public. P—Business 211.

221. Principles of Marketing. (4) A study of the role of marketing in business and the economy. Emphasis is on the examination of marketing concepts, functions, institutions, methods, and consumer problems. P—Economics 151 and 152.

222. Marketing Strategy. (4) Managerial techniques in planning and executing marketing programs in business and nonbusiness organizations. Emphasis is on the group experience in decision making related to market segmentation, product innovation and positioning, channels of distribution, pricing, and promotion. Extensive use of cases, readings, and team presentations. P—Business 201 and 221.

223. International Marketing. (4) Problems in marketing overseas, analysis of cultural, economic, and political environment of foreign marketing operations, organization and control of the multinational company. P—Business 221 and senior standing.

224. Marketing Research. (4) Introduction to fundamentals of research methodology and use of research information in marketing decision making. Topics include research design, data collection methods, scaling, sampling, and alternate methods of statistical data analysis. Students design and execute their own research projects. P—Business 201 and 221.

225. Buyer Behavior. (4) Study of basic behavioral science applications in buyer motivation and behavior and in buying decisions. Emphasis on current research and theory relating to consumer behavior. P—Business 221.

231. Principles of Finance. (4) An introduction to the field of finance including financial management, investment analysis, and financial institutions and markets. Emphasis is placed on financial management at the level of the business entity or non-profit organization. P—Accounting 112 and Economics 151 and 152.

232. Advanced Financial Management. (4) Management decision-making applied to

the financial function, including investment, financing, dividend, and working capital decisions and their impact on the value of the firm. P—Business 201 and 231.

233. Investment Analysis. (4) Study of investment alternatives, expected returns, and corresponding risks; valuation of stocks and bonds applying both fundamental and technical analysis; survey of past and current methods of stock selection techniques, including portfolio considerations. P—Business 201 and 231.

234. Business Risk Management. (4) Analysis of the financial problems inherent in business risk-taking and an evaluation of insurance and alternate methods of dealing with such problems. P—Business 201 and 231.

251. Management Information Systems. (4) Study of the development, design, and implementation of management information systems with introduction to the terminology, concepts, and trends in computer hardware and software. P—Business 211.

261. Legal Environment of Business. (4) A study of the legal environment in which business decisions are made in profit and nonprofit organizations. Emphasis is put upon how the law develops and how economic, political, social, and ethical considerations influence this development.

271. Business Policy. (2) Application of the case method to problems of business policy formulation and strategic planning. P—Business 203, 211, 221, and 231.

281. Reading and Research. (2, 3, or 4) An advanced course devoted to individual reading and research in business. P—Permission of instructor.

Accountancy

111. Accounting Principles I. (4) The basic accounting process and underlying principles pertaining to the preparation and interpretation of published financial statements.

112. Accounting Principles II. (4) A continuation of Accounting 111 and an introduction to management accounting. P—Accounting 111.

151. Intermediate Accounting. (4) A detailed analysis of theory and related problems for typical accounts in published financial statements. P—Accounting 112.

152. Intermediate Accounting. (4) A continuation of Accounting 151. P—Accounting 151.

201. Business Law. (4) A study of the Uniform Commercial Code. Open only to senior majors. P—Business 261.

252. Cost Accounting. (4) Advanced study of management accounting, including budgeting, product-costing, cost allocation, standard costs, transfer-pricing, differential analysis, and cost-behavior analysis. P—Accounting 112.

253. Accounting Information Systems. (4) A study of functions performed by an adequate accounting information system and methods and procedures necessary to supply useful data, oriented toward computerized data processing. P—Accounting 252.

254. Accounting in the Not-for-Profit Sector. (4) An examination of accounting theory and practice in governmental and eleemosynary organizations. P—Accounting 151.

261. Advanced Accounting Problems. (4) A study of the more complex problems found in business operations, business combinations, reorganizations, and dissolution. P—Accounting 152.

271. Income Tax Accounting. (4) Accounting for purposes of complying with the Internal Revenue Code. Preparation of personal and business tax returns. P—Accounting 152.

273. Auditing. (4) Designed to familiarize the student with the CPA profession, with particular emphasis on the attest-function. P—Accounting 152 and 252.

275. CPA Review. (4) An intensive study of CPA-type problems found on the accounting practice and accounting theory sections of the CPA exam. P—Accounting 252 and 261.

278. Reading and Research. (2, 3, or 4) Directed study in specialized areas of accountancy. P—Permission of instructor.



Graylyn Estate, site of the residential language centers

Degrees Conferred

May 18, 1981

Bachelor of Arts

Gloria Beth Abels, <i>summa cum laude</i>	Walter Boyd Beeker Jr.
Dorothy Elizabeth Adcock, <i>cum laude</i>	Jacqueline Anne Benson
Vincent Steven Alig	Stephen Roland Berlin,
Jill Marie Allen, <i>summa cum laude</i> ,	<i>magna cum laude</i>
<i>with honors in music</i>	Charles Nesbitt Berry
Beverly Lynn Alston	Alison Rose Biggs
Stephen Matthew Amidon,	Derrick Sherrod Blackmon, <i>cum laude</i>
<i>magna cum laude</i>	Donald Sheffield Bland
Brian A. Anderson	Douglas William Blissit, <i>cum laude</i>
Glen Scott Andrews	Eric Walter Boelkins, <i>cum laude</i>
Michael Dale Applegate	Robert L. Boggs Jr., <i>cum laude</i>
Janice M. Atkins, <i>cum laude</i> ,	Carol Ann Bolton
<i>with honors in psychology</i>	Helen Elizabeth Boone, <i>cum laude</i>
Cynthia Lu Armentrout	Alan G. Bourque
Stacey Lynne Armstrong,	Robert Daniel Boyce, <i>cum laude</i>
<i>magna cum laude</i>	Sara Lynn Boyles, <i>cum laude</i>
Sharon Lynne Arnette, <i>cum laude</i>	Arden James Bradley III
Lloyd Mason Arnold	Cynthia M. Bradley, <i>cum laude</i>
Anna Priscilla Ashburn, <i>cum laude</i> ,	Janice Bradley, <i>cum laude</i>
<i>with honors in speech communication</i>	Douglas James Brady
<i>and theatre arts</i>	Christine Ann Bramel, <i>cum laude</i>
Millicent Austell	Kenneth Robert Bramlett Jr.,
Paul Thomas Bailey	<i>magna cum laude</i>
William Lenox Barker	Jennifer Susan Brantley, <i>cum laude</i>
William Roosevelt Baker Jr.	Margaret Anne Braswell, <i>cum laude</i>
Carol Denise Barbee	Kimberly Ann Brewer
Anne Easley Barnes	David Lawrence Brodish, <i>cum laude</i>
Laurie Michelle Barnes	Denise Ann Brown, <i>cum laude</i>
Melissa Marlene Barnes	Paul Clark Brown Jr., <i>magna cum laude</i>
Amelia Carlton Barnett	Stephen Blayne Brown, <i>cum laude</i> ,
Charles Daniel Barrett, <i>cum laude</i>	<i>with honors in history</i>
Karen Valinda Barrett	Douglas Scott Broyles
Edward Teer Barringer	Anthony C. Brueneio
Edwin Franklin Barry, <i>cum laude</i>	Leslie Diane Buchanan, <i>cum laude</i>
Jacqueline Ann Bates, <i>cum laude</i>	Anne Carole Bucher, <i>cum laude</i>
Susan Crockett Batson,	Catherine Anne Burgess, <i>cum laude</i>
<i>magna cum laude</i>	Howell Arnold Burkhalter
Anne Cameron Beard	Wesley Thomas Burnett
John Herndon Beard	William Christopher Buss
John Arthur Beasley III	Tony Ray Cahill

- Joyce Lynn Camp, *cum laude*
 Erin Elizabeth Campbell
 Glenn Carsten Campbell,
 magna cum laude
 Lee Webb Campbell II
 Weldon Jackson Campbell Jr.
 John Lawton Capps, *magna cum laude*
 Gregory Stewart Carter
 Pamela Lynn Carter, *cum laude*
 Clyde Brower Case III
 Clyde Richard Cash
 Edwin Rhett Chamberlain, *cum laude*
 Lori Nicol Clark
 Robert Edward Clark
 Connie Ruth Clipp, *magna cum laude*
 Stephen Colaguori
 Curtis C. Coleman III, *cum laude*
 Randall Ray Combs
 Patricia Earle Connelly
 Michael Patrick Conrad,
 magna cum laude
 Carol Elizabeth Copeland,
 magna cum laude
 Elizabeth Ann Copeland
 Cynthia Lewis Corey
 Mark Anderson Crabtree, *cum laude*
 Deanna Lynn Craig, *cum laude*
 Robert Orr Crawford III, *cum laude*,
 with honors in history
 Dwayne E. Crayton
 Sharon Ruth Cumbee, *magna cum laude*
 Bryan Keith Curran
 Susan Scott Darnell, *magna cum laude*,
 with honors in economics
 Lance Brian David
 David Lewis Davis
 Johnny Lee Dawkins III
 Anna Catherine Deal, *magna cum laude*
 Sharon Elaine Dedmon
 Ruth Hamner DeLapp
 Lisa De Maio
 Thomas Dixon Dickens
 Thomas Leslie Dooley
 John Wolcott Doss
 David Scott Dowie
 Ellis Branch Drew III, *cum laude*
 Dian Marie Dugan, *cum laude*
 Carolyn Paulette Dukeshire
 John Robert Dunlap Jr.
 Robert Joseph Dunn III
 Roger Lee Durham
 Leah M. Durner
 James Zachariah Eakes III
 Ellen Downs Easter
 Laura Ellen Eaton, *cum laude*
 Carolyn Elizabeth Edmonds
 Donald Ausbon Edmondson, *cum laude*
 Walter Elias III, *cum laude*
 Quentin Bradford Ellis
 Cynthia Brantley Ennis, *cum laude*
 Kathleen Farley
 Richard Mark Feathers, *cum laude*
 Lisa Humphrey Ferguson
 David Joseph Ferraro
 Jeffrey Alan Fink, *cum laude*
 Rhonda Gisele Fisher, *cum laude*
 Henry Staley Fonvielle, *cum laude*
 Margaret Elizabeth Ford, *cum laude*
 Pamela Ann Foresman, *cum laude*
 Martin Jon Fosso, *cum laude*,
 with honors in English
 John David Foulke Jr., *cum laude*
 Arlesa Ann Fouts, *cum laude*
 John Edward Rowan Friedenberg
 Anat Frydman, *cum laude*
 Timothy Gerard Gannon Jr.
 John Charles Wayne Gardner Jr.,
 cum laude
 Steven Howard Garfinkel
 Marilyn Sue Garner
 Thomas Eugene Garrett Jr.
 James Lawrence Gastner
 Barbara Ann Geiger, *cum laude*
 Arthur A. Gennari
 Sheryl Ann Gillikin, *magna cum laude*
 Gregory Gee Glass
 Martin Bay Godwin
 David Goldring
 Todd Alan Goodling
 John Michael Goodman
 Ross Steingrimur Goodman
 James Carlyle Gordon III

Charles Parker Grannis, <i>magna cum laude,</i> <i>with honors in psychology</i>	Lonnie West Hughes III
David Spencer Green, <i>cum laude</i>	Timothy Olen Hull, <i>cum laude</i>
Stanlee Parks Greene Jr.	John Traver Humphrey
Sandra Jean Griffin, <i>cum laude</i>	Robert Howard Humphries
Trina Dare Griffin, <i>cum laude</i>	John Charles Hunter
James Richard Groome, <i>magna cum laude</i>	Dean Scott Hutcherson
Nelson Smith Gwinn III, <i>magna cum laude,</i> <i>with honors in biology</i>	Alfred Sherwood Irving Jr.
Kenneth Bruce Gwynn, <i>cum laude</i>	Jeffrey Neal Isaac, <i>cum laude</i>
Heidi Ann Hagen, <i>summa cum laude</i>	Ellen Ann Jackson
Dwayne Allen Hall	Melanie Ruth Jarratt, <i>cum laude</i>
Terry W. Hammond Jr.	William Leroy Jeffords Jr.
James Gregory Hampton	Gail Schultz Jenkins
Cynthia Lynn Hanna, <i>cum laude</i>	Robert Ashley Jenkins
Samuel F. Hanna	James Jeffrey Jeter
Diane Irene Hansen	Sara Grace Johe
Lynnell Elizabeth Hardie, <i>cum laude</i>	Cynthia Alice Johnson
Norman Brian Harris	Rebecca Darlene Johnson
Susan Rhea Harris	Deborah L. Jones
Helen Adair Hatcher	Nena Randolph Jones, <i>cum laude</i>
Karen R. Haynes, <i>cum laude</i>	Randle Leon Jones
Joel Mark Heilman	Susan Drummond Jones, <i>cum laude</i>
Henry Joseph Peter Heim, <i>cum laude</i>	Ramona Suzette Jordan
James Relerford Helvey III, <i>magna cum laude,</i> <i>with honors in German</i>	Walter Baker Jordan
Nancy Baucom Henderson, <i>cum laude</i>	Mary Elizabeth Keeton
Kenneth Charles Herring, <i>cum laude</i>	Sarah Katherine Kelly, <i>cum laude</i>
Louise Staley Hiatt	Karen Lynn Kepler, <i>cum laude</i>
James Stacy Hicks, <i>cum laude</i>	James Donald Kepley Jr.
Timothy Robert Hileman	Hanna Elizabeth King, <i>cum laude</i>
Brian Taylor Hill	Karen Sue Klemons
Bryan Keith Hill	Jeffrey Neil Knight, <i>cum laude</i>
Esther Jean Hill, <i>magna cum laude</i>	Ruth Sydnor Knight
Gary James Hill	John Joseph Korzen, <i>cum laude</i>
Frank Hinman II	Lincoln B. Krause, <i>cum laude</i>
John David Hipes, <i>cum laude,</i> <i>with honors in history</i>	Kimberley Beck Kurtz, <i>cum laude</i>
Benjamin Keith Hodge	Michael Reid Laffon
John George Holevas, <i>magna cum laude</i>	Michael Kirk Lands, <i>cum laude</i>
William Amos Hough III	Lee Anne Langley
Terry Layne Houser, <i>cum laude</i>	Nancy Ellen Lanter
	Jonathan Allen Laymon
	Regina Elizabeth Lazorik
	Marshall Thompson Lee
	Greg Alan Lefelar, <i>cum laude</i>
	David Arthur Leland
	Sandra Fay Leonard, <i>cum laude</i>
	Carol Lewis, <i>summa cum laude</i>
	George H. Limpert, <i>cum laude</i>

- Kenneth Russell Lindquist
 Donald G. Lisenbee Jr.
 Kimberly Dawn Love
 Stephen Winston Lucas
 Stacy Lee Luks, *cum laude*
 Laura Ann MacDermeid
 William Robertson Madill, *cum laude*
 Gary Cecil Mahathey
 Perry Nicholas Mandanis
 Dennis Gerard Manning
 Kathleen Ann Heaphy Marlowe
 Andrea Lieta Marrotte
 David Brian Marshall, *magna cum laude*,
 with honors in English
 Thomas Ellis Marshall
 John Dearman Martin
 Kenneth Andrew Matich
 Ronald Lee Mattison
 Charles Wayne Maxim, *cum laude*
 Melinda Ann Maxwell
 John Timothy McCabe
 Maria Ann McDaniel
 Carole Jean McDonald
 Gilbert Ray McGregor
 James Charles McLaughlin Jr.
 Kathleen Jane McLaughlin
 John Rufus McNair Jr.,
 summa cum laude
 Scott Eugene McNulty
 John Thomas Meadors
 Mark Lawrence Meyer
 James Moxley Michael Jr.
 David John Middleton III
 Janice Kay Middleton, *cum laude*
 Mary Lynne Millwood, *magna cum laude*
 Judith Lorraine Milsap, *cum laude*
 George Evans Minot III
 Frankie Darel Moore
 Rodney Joe Moore
 Robert Wayne Morgan
 Linda H. Morton
 John Christopher Mullen,
 magna cum laude,
 with honors in English
 Marilyn Patrice Munson
 Willis Everette Murphrey IV
 Jane Ellen Murphy
 Laura Rae Murray
 John Howard Muse, *cum laude*
 Julia Annette Myers, *summa cum laude*
 Susan Grace Myers, *magna cum laude*
 Susan Lynn Nall
 Harry Russell Neighbors Jr., *cum laude*
 John Raymond Nelson III,
 magna cum laude
 Hillary Anne Nichols, *cum laude*
 Douglas Scott O'Brien
 Donna Marie Ollis, *cum laude*
 Sherry Joan Olson
 Katherine Gail Ostdahl
 Linda Susan Owen, *cum laude*
 Mark S. Owens
 Samuel Phillips Page
 Stephen Michael Pahides
 Richard Burton Park
 Pamela Jean Parker
 David Randolph Parsons
 Charles Fredrick Patton Jr.
 Lennis Louise Percy, *summa cum laude*
 Rodney Franklin Pell
 Karey Lea Perkins
 Jarvis Wesley Perry
 Kenneth Joseph Perry
 Kimberly Jane Perry, *cum laude*
 Joseph F. A. Petrone, *cum laude*
 Robert Finnie Phillips, *cum laude*,
 with honors in history
 Carlen Rae Pierce, *cum laude*
 William Thomas Pike Jr.
 Colin Mackenzie Pitcairn
 Briane Pittman, *cum laude*,
 with honors in psychology
 Patricia Mae Polk
 Kenneth McCarley Prichard
 Denise Elaine Privette
 Kirk Proctor
 Lisa Diane Quisenberry
 Angela Denise Rabb
 Earl Lee Raby Jr.
 Thyra Lynne Rauch, *cum laude*
 E. Kemp Reece Jr.
 Jane Griswold Reed, *magna cum laude*

- Alice Louise Reid, *cum laude*
 Michael George Riley, *summa cum laude*
 Stephanie Decker Roach, *cum laude*
 Jane Naylor Roberson
 David Prince Robertson,
 summa cum laude
 John Scott Robinson
 James Orion Rogers, *cum laude*
 John Clifton Rogers
 Susan Leigh Rogers, *summa cum laude*
 John Andrew Rote
 Amy Delores Russell
 Martha Anne Russell, *cum laude*
 David Jackson Savage III
 Deborah Ann Schnerring, *cum laude*,
 with honors in psychology
 Bradley Nicholas Schulz
 Gary Wayne Scott, *cum laude*
 Cynthia Louise Sechler,
 magna cum laude,
 with honors in romance languages
 Margaret Lynn Shearin, *cum laude*
 Sharon Sheets
 Jerry Christopher Sieg
 Carol Anne Singletary, *cum laude*
 Wilbert Reynard Singleton
 Lisa Helena Slade
 Brick Dudley Smith
 Cecile Carr Smith, *cum laude*
 David Coventry Smith, *cum laude*
 Gregory Stuart Smith, *cum laude*
 Marian Keith Smith
 Mary Eliza Smith
 Anne Elizabeth Spencer,
 magna cum laude,
 with honors in romance languages
 Amanda Lee Spitler
 Mark Alan Springfield
 Tracy Stines
 Ann Black Strader
 Jimmy Blake Strickland
 Gary Kent Sue
 James Russell Sugg Jr.
 Julia Winifred Summerlin,
 magna cum laude
 Michael Alan Tatum
 Katherine Leigh Taylor
 Michael Thomas Teixeira, *cum laude*
 Lorrey F. Thabet, *cum laude*
 Corlis Rene Thomas
 Daniel Kent Thomas
 Sally Reid Tickle, *cum laude*
 Robin Kelly Timberlake, *cum laude*
 Karen Louise Trafford, *cum laude*
 Ashton Pleasants Trice
 Robert Andrew Troxler Jr.
 Janice Elaine Trull, *summa cum laude*
 Stephen Frank Turco, *cum laude*
 Donald Andrew Tynes
 Frederick Hans Uberseder
 Andrew Marsh Utter, *cum laude*,
 with honors in economics
 Jane Reid Van Brug
 Leslie Elizabeth VanLehn, *cum laude*
 Anja Astrid van Nood
 Patricia Anne Vecellio, *summa cum laude*
 Pamela Gwen Veeder, *cum laude*,
 with honors in psychology
 Robert Stephen Vick
 Richard Frederick von Dorn Jr.
 John Timothy Wagner, *cum laude*
 Terry Lynn Wagstaff
 Carrie Elizabeth Wall
 Amy Rebecca Walters, *magna cum laude*
 Michael Edward Walters
 David Marion Warren, *cum laude*
 Cynthia LaVerne Washington
 Valerie Lynn Watson
 Richard Mariner Waugh, *cum laude*
 Randall Babbitt Weaver, *cum laude*
 Mary Kathryn Weeber, *cum laude*
 Melanie Rebecca Welch
 Steven Arthur Welty
 Joseph Warren Wescott II, *cum laude*
 Robert Craig Wheatley
 Lisa Ann Whisnant, *cum laude*
 Connie Lynne White
 David B. White
 Nellie Dorey White
 Charles Edward Wiles
 Kelly Gene Williams
 Nathan Ramon Williams, *magna cum laude*

Perry Ward Williams
 Drew Kimbal Willson
 Diane Hamlet Windle
 Craig Edwin Wolff, *magna cum laude*
 Annette Woolard, *cum laude*

Mary Martha Wooten, *cum laude*
 David McKinney Wright
 Richard Springer Wurst Jr., *cum laude*
 Carol Ann Yandle, *cum laude*
 Deborah L. Zvosec, *cum laude*

May 18, 1981

Bachelor of Science

Diane Francis Allen
 Franklin Ray Allen
 Rickey Jay Allred, *cum laude*
 Richard Blake Atkins
 Anne Saunders Barbour, *cum laude*
 Gregory Bailey Barrow
 Jeffrey Arthur Batts
 Robyn Adair Bowers, *cum laude*
 Robert Alan Brewster, *magna cum laude*
 Hughlene Annette Burton
 Robert Nicholas Butler Jr., *cum laude*
 Clifford Frank Campbell
 Michael Ronald Cantin
 John James Cater III, *cum laude*
 Scott Thomas Chapman, *cum laude*,
with honors in mathematics
 Ingil Cho
 Cynthia Hope Clodfelter, *cum laude*
 Claire Ellen Colley, *magna cum laude*
 Sandy William Combs
 Barbara Lynne Conrad
 Samuel Power Cox
 Derek John Crocker
 Charles David Dahms
 Mark Elliot Damon
 Christine Susan Daniel, *cum laude*
 Jane Elizabeth Danieley
 Ann Jenkins Davis
 Amanda Gail Demouthe, *cum laude*
 Sarah Page Dickson
 Donna Lee Hardesty Douglass,
cum laude
 Tammy Joan Dull
 Jon Christopher DuMond

Richard Brian Dyer, *magna cum laude*
 Travis Edward Eldridge
 Andrew Claiborne Ellis
 Diane Gladys Evans, *cum laude*,
with honors in physical education
 Charles Robert Faig
 John Robert Feaganes
 Grady Nelson Forrester Jr.
 John Joseph Fosina
 Douglas Ralph French
 Gregory Scott Frisby
 Christopher Lamar Gaynor
 John Howard Gebbie
 John Wesley Geissinger, *cum laude*
 Amy Louise Geithner
 Elizabeth Imm Graham,
magna cum laude
 Sarah Kathryn Graham
 Jack Marvin Gustafson Jr.
 Theresa Catherine Hall
 John David Hermansdorfer
 N. Daniel High
 Rhonda Darlene Hill, *cum laude*
 William Davis Hoey
 Julie Helene Hoffman, *cum laude*
 Thomas Edward Hoke
 Stephen John Horvath
 Christopher Steven Hurd, *cum laude*
 John Fahey Jameson
 Michael Stuart Jeske
 Franklin L. Johnson
 David Neal Jones, *cum laude*
 Craig Griffin Kmosko
 William Ronald Knight, *cum laude*

Randal Clark Kushma	David Aaron Senter, <i>cum laude</i>
Edwin Edgely Laws II	Melodie Lynne Simmons, <i>cum laude</i>
Charles William Leonard Jr., <i>cum laude</i>	Lockhart Simpson
Carol Ann Leuchtenberger,	Rayborn Duke Slaughter
<i>summa cum laude</i>	Melany Rose Smith
Lavonda Kay Luper	Eric Scott Snow, <i>cum laude</i>
Tammy Taylor Mabe	Diane Thwaite Solenberger,
Stephen E. Marano	<i>magna cum laude</i>
Mark Nixon McCall, <i>cum laude</i>	Richard M. Spaulding Jr., <i>cum laude</i>
Bruce John McCreedy Jr., <i>cum laude</i>	Andrew John Sterge, <i>cum laude</i>
James William McGill, <i>cum laude</i>	Robert Bruce Stewart, <i>summa cum laude</i>
Laurie Elizabeth McGuire,	Colleen Marie Elizabeth Stoll
<i>magna cum laude</i>	Kevin Mark Storms
Martin James McHugh Jr.	Susan Sharer Strand
Brenda Vernese McKoy, <i>cum laude</i>	Dennis Gordon Tabor
Stephanie Menking	Tamara June Taylor, <i>magna cum laude</i>
Noland Mattocks Mewborn	Mark D. Tetsworth
Darrell John Miller, <i>cum laude</i>	Laurence Lambert Thayer
Jean Marie Mitchell, <i>cum laude</i>	Laura Leah Thomas, <i>cum laude</i>
Eugene William Munro	Walter George Thomason, <i>cum laude</i>
Emily Grace Neese	Ronald Paul Townsend,
Daniel A. Noakes	<i>summa cum laude</i>
Eric Stuart Osborn, <i>magna cum laude</i>	James Van Dessel Jr.
Clara Marguerite Page	Jason Schellenger Venuto
Lisa Anne Patterson	Yoshiko Wakabayashi, <i>magna cum laude</i>
Tamara Lynn Pausch, <i>cum laude</i>	John T. Walker, <i>cum laude</i>
Oren Bradley Payne	D. Stephen Wallin, <i>cum laude</i>
Douglas David Peeler	Joseph Kevin Waters
Sarah Ellen Peterson, <i>magna cum laude</i>	Jane Lee Watson, <i>cum laude</i>
Laurie Marsden Plyler, <i>cum laude</i>	John Dewey Weaver III
Susan Elizabeth Prugh,	Daria Joy White
<i>magna cum laude, with honors in English</i>	Kirk Cecil Wilkenson, <i>cum laude</i>
David Mark Riffe, <i>summa cum laude,</i>	James Rush Wilson III
<i>with honors in physics</i>	John Marshall Wright
Cynthia Marie Rusnak	Robert Alan Yeager, <i>cum laude</i>
Charles Bruce Russell, <i>cum laude</i>	Brian Wesley Young, <i>cum laude</i>
Lisa Kaye Schwinn	Phyllis Jo Zerrudo, <i>cum laude</i>
Gina Marie Sears	Jeffrey Leighton Zierenberg
Cynthia Wilcox Seidel, <i>cum laude</i>	Robert William Zweier

August 4, 1981

Bachelor of Arts

David Embry Abell	Douglas Griffin Keith
Luke James Adrian	Ervin Eugene Lampert III
William Milton Camp	Martha Jane Landstra
Katherine Annette Clay	Scott Robert McEwan
Peter A. Cooper	Robert Anthony Meier
Joseph Royer Davidson	Thomas D. Neilson
Dexter Turner Duncan	Frances Ramsey Patterson
Paul Stephen Eberle	Ann Larkin Phelps
Kay Lynn Edmonds, <i>magna cum laude</i>	Linda Ann Seay
Edgar Estes Folk IV	Maureen Ann Sheehan
Michael Bernard Graybeal	Wiley Grant Shingleton
Gregory Peter Gruendel	Steven Bradley Truitt
James Michael Gurley	Billy Gregory Tsintzos
George Harvey Hall Jr.	Ingram Dickinson Tynes
Brian Edmond Heelan	Vivian Eunice Whitley, <i>magna cum laude</i>
Victoria Ann Hill	Michael Antonio Wisher
Allison Sanders Hines, <i>cum laude</i>	

August 4, 1981

Bachelor of Science

Walter Bryan Barger	Catherine Anne Spargo
Audrey Carol Cabe	Steven Ellwood Spencer
Jane Hanby Champion	Mark Joseph Sterner
Leslie Gray Frye Jr.	Randy Harland Stoltz
Graydon Alvice Miller III	Douglas John Warstler
Gary Michael Monroe	Caleb Dwight West III
Kurt David Navratil	

December 19, 1981

Bachelor of Arts

Janet Lynne Alexander, <i>cum laude</i>	Dean Franklin Barnes
Breon Jamie Golubin Allen	Donna Kay Cash, <i>cum laude</i>
duWayne George Amen	Audene Peggy Church, <i>cum laude</i>
Katherine Lynnette Amen	Catherine Louise Crawley
Loper Lowry Baldwin, <i>cum laude</i>	Edward Taylor Dancy IV

Thomas Bayard De Loache III
 Deborah Renee Doster, *cum laude*
 Lydia Marie Eden
 Diana Marie Ereth
 Stephen Hugh Fuller
 Joel Thomas Gilbreath
 Cyrus Edward Gwyn Jr.
 Charles Jeffrey Harper
 James Byron Houser, *magna cum laude*
 Philip Charles Hrichak
 John Ed Johnson III
 James Martin Kennedy
 Thomas Joseph Kieffer
 Mary Anne McClure
 James Frederick McKinsey, *cum laude*

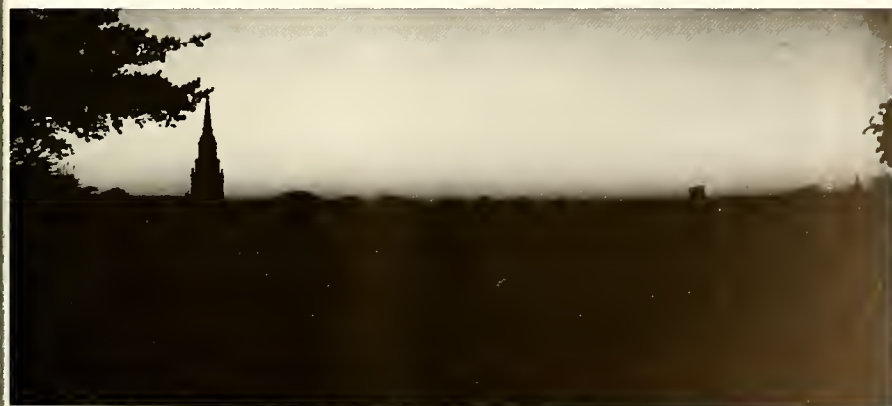
Ann Christine Meletis
 Stuart Coleman Moore
 John Edgar Reece II
 David Hadley Richardson
 Katherine Hudgins Robins
 Christopher Isaac Sheaffer
 Lynne Marie Spencer, *cum laude*
 William Myles Taylor III
 Donna Terese Thornton
 Mark Gerald Usdin
 Jennifer Logan Weaver
 Rodney Carlton Wesson
 Robert Brenaman Wrenn Jr.
 Carl Merritt Yow

December 19, 1981

Bachelor of Science

Terrence Burton Blanch
 Thomas Edward Johnstone
 Steven Bradley Larsen
 Michael Joseph Meyer
 Edward Warren Newton
 Charles Eugene Pierce Jr.

Stewart D. Powers
 Johanna-Maria Iris Seifert-Shannon,
cum laude
 Gary Keith Smith
 Donna Cheryl Snipes



Honor Societies

ODK & Mortar Board

Members of the Class of 1981

Jill Marie Allen	Lynn Dee Knapp
Stephen Roland Berlin	Jeffrey Neil Knight
Mark Anderson Crabtree	Stacy Lee Luks
Susan Scott Darnell	Julia Annette Myers
Richard Mark Feathers	Michael George Riley
Arlesa Ann Fouts	Amy Lynn Siemer
Trina Dare Griffin	Diane Thwaite Solenberger
James Relerford Helvey 111	Michael Thomas Teixido
Melanie Ruth Jarratt	Walter George Thompson

Phi Beta Kappa

Members of the Class of 1981

Gloria Beth Abels	Laurie Elizabeth McGuire
Jill Marie Allen	Deni Gladieux McIntyre
Stephen Matthew Amidon	John Rufus McNair Jr.
Stacey Lynne Armstrong	Mary Lynne Millwood
Stephen Roland Berlin	John Christopher Mullen
Kenneth Robert Bramlett Jr.	Julia Annette Myers
Paul Clark Brown Jr.	Susan Grace Myers
Glenn Carsten Campbell	John Raymond Nelson
John Lawton Capps	Eric Stuart Osborn
Connie Ruth Clipp	Lennis Louise Percy
Claire Ellen Colley	Sarah Ellen Peterson
Michael Patrick Conrad	Susan Elizabeth Prugh
Carol Elizabeth Copeland	David Mark Riffe
Susan Scott Darnell	Michael George Riley
Anna Catherine Deal	David Prince Robertson
Kay Lynn Edmonds	Susan Leigh Rogers
Sheryl Ann Gillikin	Cynthia Louise Sechler
Elizabeth Imm Graham	Susan Dale Shearin
Charles Parker Grannis	Anne Elizabeth Spencer
James Richard Groome	Robert Bruce Stewart
Nelson Smith Gwinn 111	Julia Winifred Summerlin
Heidi Ann Hagen	Stephen Powel Trippie
James Relerford Helvey 111	Ronald Paul Townsend
John George Holevas	Janice Elaine Trull
James Byron Houser	Patricia Anne Vecellio
Carol Ann Leuchtenberger	Yoshiko Wakabayashi
Carol Lewis	Amy Rebecca Walters
David Brian Marshall	Craig Edwin Wolff

Catherine Earle Woodard

Enrollment

Fall 1981

The College	<i>Men</i>	<i>Women</i>	<i>Total</i>
Seniors	498	304	802
Juniors	416	315	731
Sophomores	461	300	761
Freshmen	537	308	845
Unclassified	14	18	32
Total	1,926	1,245	3,171

The Graduate School

(Reynolda Campus)

Master's Program	75	131	206
Doctoral Program	15	1	16
Unclassified	5	13	18
Total	95	145	240

The Graduate School

(Hawthorne Campus)

Master's Program	6	11	17
Doctoral Program	43	34	77
Unclassified	4	0	4
Total	53	45	98

The School of Law	370	140	510
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The Babcock Graduate School of Management

Master's Program	143	46	189
Executive Program	61	11	72
Total	204	57	261

The Bowman Gray

School of Medicine

Allied Health Programs	323	104	427
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Total	3,020	1,809	4,829
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Geographic Distribution — Undergraduates

	<i>Men</i>	<i>Women</i>	<i>Total</i>
Alabama	7	4	11
Alaska	0	1	1
Arizona	0	1	1
Arkansas	0	1	1
California	8	6	14
Colorado	2	1	3
Connecticut	44	14	58
Delaware	19	13	32
District of Columbia	7	5	12
Florida	115	60	175
Georgia	64	42	106
Hawaii	0	0	0
Idaho	1	0	1
Illinois	31	10	41
Indiana	5	2	7
Iowa	1	1	2
Kansas	1	0	1
Kentucky	14	16	30
Louisiana	1	0	1
Maine	1	0	1
Maryland	91	58	149
Massachusetts	24	5	29
Michigan	12	1	13
Minnesota	3	2	5
Mississippi	0	0	0
Missouri	3	7	10
Montana	0	0	0
Nebraska	0	0	0
Nevada	0	0	0
New Hampshire	2	1	3
New Jersey	122	44	166
New Mexico	0	0	0
New York	105	26	131
North Carolina	796	673	1,469
North Dakota	0	0	0
Ohio	43	15	58
Oklahoma	1	1	2
Oregon	0	0	0
Pennsylvania	95	34	129
Rhode Island	3	1	4
South Carolina	47	33	80
South Dakota	0	0	0
Tennessee	33	19	52

Texas	8	6	14
United States Territories	2	1	3
Utah	0	0	0
Vermont	2	0	2
Virginia	160	116	276
Washington	0	0	0
West Virginia	23	19	42
Wisconsin	7	1	8
Wyoming	1	0	1

Other Countries

	<i>Men</i>	<i>Women</i>	<i>Total</i>
Australia	1	0	1
Belgium	1	1	2
Brazil	1	0	1
Canada	3	0	3
Colombia	1	0	1
Dominican Republic	1	0	1
France	1	0	1
Greece	1	0	1
Guyana	1	0	1
Japan	2	1	3
Malaysia	2	0	2
Mexico	1	0	1
Netherlands	1	0	1
Panama	1	0	1
Sweden	1	0	1
Switzerland	0	1	1
Turkey	1	0	1
United Kingdom	1	0	1
Venezuela	1	2	3



An art exhibit in the lobby of the Scales Fine Arts Center

The Board of Trustees

Terms Expiring December 31, 1982

Joseph Branch, Raleigh	Robert A. Culler, High Point
Dewey H. Bridger Jr., Bladenboro	Manuel E. Cannup, Greensboro
Louise Broyhill, Lenoir	Charles Cedric Davis, Farmville
C. Frank Colvard Jr., West Jefferson	John D. Larkins, Trenton
William W. Leathers III, Rockingham	

Terms Expiring December 31, 1983

Charles W. Cheek, Greensboro	Pete Lovette, Wilkesboro
Thomas H. Davis, Winston-Salem	Claude A. McNeill Jr., Elkin
C. C. Hope Jr., Charlotte	Mary Lide Morris, Burlington
John M. Lewis, Raleigh	Dale Simmons, Mt. Airy
Lonnie Williams, Wilmington	

Terms Expiring December 31, 1984

Albert L. Butler Jr., Winston-Salem	Katharine Mountcastle, New Canaan,
Egbert L. Davis Jr., Winston-Salem	Connecticut
Mark Holt, Fayetteville	W. Boyd Owen, Waynesville
Petro Kulynych, Wilkesboro	Leon L. Rice, Winston-Salem
James W. Mason, Laurinburg	Eugene Worrell, Charlottesville,
	Virginia

Terms Expiring December 31, 1985

Bert L. Bennett, Winston-Salem	Weston P. Hatfield, Winston-Salem
Robert P. Caldwell Sr., Gastonia	Alton H. McEachern, Greensboro
R. Stuart Dickson, Charlotte	J. Robert Philpott, Lexington
Floyd Fletcher, Durham	J. Smith Young, Lexington
Jean H. Gaskin, Charlotte	

Officers

(For one-year terms beginning January 1, 1982)

C. C. Hope Jr., Charlotte, Chairman
 Charles W. Cheek, Greensboro, Vice-Chairman
 Elizabeth S. Drake, Winston-Salem, Secretary
 John G. Williard, Winston-Salem, Treasurer and Assistant Secretary
 Womble Carlyle Sandridge & Rice, Winston-Salem, General Counsel
 Leon H. Corbett Jr., Winston-Salem, Associate General Counsel

The Board of Visitors

Arnold Palmer, Latrobe, Pennsylvania
Chairman, University Board of Visitors

James Alfred Martin Jr., Laurinburg
Chairman, College Board of Visitors

Wake Forest College and Graduate School

Terms Expiring December 31, 1982

Samuel H. Adler, Rochester, New York	Albert R. Hunt Jr., Washington, D. C.
Maya Angelou, Winston-Salem	Graham A. Martin, Winston-Salem
William L. Bondurant, Winston-Salem	Martin Mayer, New York, New York
Wallace Carroll, Winston-Salem	Jasper D. Memory, Raleigh
Ralph Ellison, New York, New York	Bill Moyers, New York, New York
Harold T. P. Hayes, New York, New York	Eugene Owens, Charlotte

Terms Expiring December 31, 1983

George Anderson, Jacksonville, Florida	Constance Gray, Winston-Salem
A. R. Ammons, Ithaca, New York	Charles U. Harris, Delaplane, Virginia
Bert Bennett, Winston-Salem	Hubert Humphrey, Greensboro
John Chandler, Williamstown, Massachusetts	James Alfred Martin Jr., New York, New York
Merrimon Cuninggim, Winston-Salem	Earl Slick, Winston-Salem
Ronald Deal, Hickory	Zachary T. Smith, Winston-Salem
Arthur E. Earley, Cleveland, Ohio	Ferne Sticht, Winston-Salem

Terms Expiring December 31, 1984

David Bryant, S. Charleston, West Virginia	Jack Hatcher, Lebanon, New Hampshire
Aurelia Gray Eller, Winston-Salem	Connie William King, Nashville, Tennessee
Frank Forsyth, Winston-Salem	John F. McNair 111, Winston-Salem
Anne Reynolds Forsyth, Winston-Salem	Wayne Oates, Louisville, Kentucky
Stanley Frank, Greensboro	Lorraine F. Rudolph, Winston-Salem
Edward Gould, Atlanta, Georgia	Frank Willingham, Houston, Texas

Terms Expiring December 31, 1985

Herbert Brenner, Winston-Salem	K. Wayne Smith, Washington, D. C.
F. Hudnall Christopher Jr., Winston-Salem	Leland T. Waggoner, Short Hills, New Jersey
E. Garland Herndon, Atlanta, Georgia	Meade Willis, Winston-Salem
Thomas W. Lambeth, Winston-Salem	J. Tylee Wilson, Winston-Salem
Robert Maloy, Washington, D. C.	Judy Woodruff, Washington, D. C.

Ex-Officio Members

Jerry Attkisson, President, Alumni Council, Atlanta, Georgia
James W. Mason, Chairman, Planning and Development Committee,
Board of Trustees



President James R. Scales

The Administration

Date following name indicates year of appointment.

University

- James R. Scales (1967) *President*
 B. A., Oklahoma Baptist; M.A., Ph.D., Oklahoma; Litt.D.,
 Northern Michigan; LL.D., Alderson-Broadbudd; LL.D., Duke; Litt.D., Belmont Abbey
- Edwin Graves Wilson (1946, 1951) *Provost*
 B.A., Wake Forest; A.M., Ph.D., Harvard
- Manson Meads (1947, 1963) *Vice President for Health Affairs and
 Director of the Medical Center*
 B.A., California; M.D., Sc.D., Temple
- John G. Williard (1958) *Vice President and Treasurer*
 B.S., North Carolina (Chapel Hill); C.P.A., North Carolina
- G. William Joyner Jr. (1969) *Vice President for Development*
 B.A., Wake Forest
- Russell H. Brantley Jr. (1953) *Assistant to the President and
 Director of Communications*
 B.A., Wake Forest
- Leon Corbett (1968) *Associate General Counsel*
 B.A., J.D., Wake Forest
- Ross A. Griffith (1966) *Director of Equal Opportunity*
 B.S., Wake Forest; M.Ed., North Carolina (Chapel Hill)

College

- Thomas E. Mullen (1957) *Dean of the College*
 B.A., Rollins; M.A., Ph.D., Emory
- Robert Allen Dyer (1956) *Associate Dean*
 B.A., Louisiana State; Th.M., Ph.D., Southern Baptist Seminary
- Toby A. Hale (1970) *Assistant Dean and Director of Educational
 Planning and Placement*
 B.A., Wake Forest; M.Div., Duke; Ed.D., Indiana
- N. Rick Heatley (1970) *Associate in Academic Administration
 and Associate Director
 of Educational Planning and Placement*
 B.A., Baylor; M.A., Ph.D., Texas
- Patricia Adams Johansson (1969) *Assistant to the Dean
 of the College*
 B.A., Winston-Salem State; M.A., Wake Forest

Graduate School

- Henry Smith Stroupe (1937) *Dean of the Graduate School*
 B.S., M.A., Wake Forest; Ph.D., Duke
- Harold O. Goodman (1958) *Associate Dean for Biomedical
 Graduate Studies*
 B.A., M.A., Ph.D., Minnesota

School of Law

John D. Scarlett (1955, 1979) B.A., Catawba; J.D., Harvard	<i>Dean of the School of Law</i>
Leon H. Corbett Jr. (1968) B.A., J.D., Wake Forest	<i>Associate Dean</i>
Robert F. Clodfelter (1981) LL.B., Duke	<i>Associate Dean for Academic Affairs</i>
Charles H. Taylor (1976) B.S., J.D., Wake Forest	<i>Director of Continuing Legal Education</i>
Jean K. Hooks (1970)	<i>Director of Admissions and Assistant to the Dean</i>
Laura L. Myers (1959)	<i>Director of Placements</i>

Babcock Graduate School of Management

Edward L. Felton Jr. B.A., Richmond; B.D., Southeastern Seminary; M.B.A., D.B.A., Harvard	<i>Dean of the Babcock Graduate School of Management</i>
William L. Berry (1979) B.S., Virginia Polytechnic; M.B.A., Western Kentucky; D.B.A., Harvard	<i>Associate Dean for Academic Affairs</i>
Michael L. Rice (1980) B.S., M.B.A., Florida State; Ph.D., North Carolina (Chapel Hill)	<i>Associate Dean of Administration</i>
James M. Clapper (1975) B.S., M.S., Rensselaer; Ph.D., Massachusetts	<i>Director of MBA Executive Program</i>
Jean B. Hopson (1970) B.A., Murray State; M.S. in L.S., George Peabody; M.B.A., Wake Forest	<i>Assistant Dean</i>
Bruce R. Holliday (1981) B.A., Davidson College; M.B.A., Wake Forest	<i>Director of Admissions</i>

Bowman Gray School of Medicine

Richard Janeway (1966) B.A., Colgate; M.D., Pennsylvania	<i>Dean of the Bowman Gray School of Medicine</i>
Nat E. Smith (1976) B.A., Erskine; M.D., Georgia	<i>Associate Dean</i>
C. Nash Herndon (1942, 1966) B.A., Duke; M.D., Jefferson	<i>Senior Associate Dean for Research Development</i>
J. Kiffin Penry (1979) B.S., M.D., Wake Forest	<i>Associate Dean for Research Development (Neurosciences)</i>
Harold O. Goodman (1958) B.A., M.A., Ph.D., Minnesota	<i>Associate Dean for Biomedical Graduate Studies</i>
Clyde T. Hardy Jr. (1941) B.A., Richmond	<i>Associate Dean for Patient Service</i>

- Warren H. Kennedy (1971) *Associate Dean for Administration*
B.B.A., Houston
- John D. Tolmie (1970) *Associate Dean for Student Affairs*
B.A., Hobart; M.D., McGill
- Emery C. Miller Jr. (1955) *Associate Dean for Continuing Education*
B.A., North Carolina (Chapel Hill); M.D., Johns Hopkins
- John H. Felts (1978) *Associate Dean for Admissions*
B.S., Wofford; M.D., South Carolina
- James C. Leist (1974) *Assistant Dean for Continuing Education*
B.S., Southeastern Missouri State; M.S., Ed.D., Indiana
- J. Dennis Hoban (1978) *Director of the Office of Educational Research and Services*
B.A., Villanova; M.S., Ed.D., Indiana

School of Business and Accountancy

- Thomas C. Taylor (1971) *Dean of the School of Business and Accountancy*
B.S., M.A., North Carolina (Chapel Hill);
Ph.D., Louisiana State; C.P.A., North Carolina

Summer Session

- Percival Perry (1939, 1947) *Dean of the Summer Session*
B.A., Wake Forest; M.A., Rutgers; Ph.D., Duke

Student Services

- David Allen Hills (1960) *Coordinator of Student Services*
B.A., Kansas; M.A., Ph.D., Iowa
- Mark H. Reece (1956) *Dean of Men*
B.S., Wake Forest
- Lula M. Leake (1964) *Dean of Women*
B.A., Louisiana State; M.R.E., Southern Baptist Seminary
- Edward R. Cunnings (1974) *Director of Housing*
B.S.M., M.Ed., St. Lawrence
- Michael Ford (1981) *Director of the College Union*
B.A., Wake Forest; M.Div., Gordon-Conwell Theological Seminary
- Brian M. Austin (1975) *Director of the Center for Psychological Services*
B.A., Monmouth; M.S.Ed., Ph.D., Southern Illinois
- Marianne Schubert (1977) *Assistant Director of the Center for Psychological Services*
B.A., Dayton; M.A., Ph.D., Southern Illinois
- Mary Ann H. Taylor (1961, 1978) *Director of University Student Health Services*
B.S., M.D., Wake Forest

Campus Ministry

- Edgar D. Christman (1956, 1961) *Chaplain*
B.A., J.D., Wake Forest; B.D., Southeastern Baptist Seminary;
S.T.M., Union Seminary

David L. Fouché
 B.A., Furman;
 M. Div., Southeastern Baptist Seminary

*Assistant Chaplain and
 Baptist Campus Minister*

Records and Institutional Research

Ben M. Seelbinder (1959) *Director of Records and Institutional Research*
 B.A., Mississippi Delta State; M.A., Ph.D., North Carolina (Chapel Hill)

Margaret R. Perry (1947) *Registrar*
 B.S., South Carolina

Personnel

James L. Ferrell (1975) *Director of Personnel*
 B.A., North Carolina (Chapel Hill); M.S., Virginia Commonwealth

Admissions and Financial Aid

William G. Starling (1958) *Director of Admissions and Financial Aid*
 B.B.A., Wake Forest

Shirley P. Hamrick (1957) *Associate Director of Admissions*
 B.A., North Carolina (Chapel Hill); M.A. in Ed., Wake Forest

W. Douglas Bland (1975) *Assistant Director of Admissions
 and Financial Aid*
 B.A., M.A. in Ed., Wake Forest

Lyne S. Gamble (1978) *Assistant Director of Admissions*
 B.A., Millsaps

Karen A. Jaenke (1980) *Admissions and Financial
 Aid Counselor*
 B.A., Wake Forest

Suzette Jordan (1981) *Admissions and Financial
 Aid Counselor*
 B.A., Wake Forest

Educational Planning and Placement

Toby A. Hale (1970) *Assistant Dean and Director of Educational
 Planning and Placement*
 B.A., Wake Forest; M.Div., Duke; Ed.D., Indiana

N. Rick Heatley (1970) *Associate in Academic Administration
 and Associate Director
 of Educational Planning and Placement*
 B.A., Baylor; M.A., Ph.D., Texas

Communications and Publications

Russell H. Brantley Jr. (1953) *Assistant to the President and
 Director of Communication*
 B.A., Wake Forest

Martha W. Lentz (1973) *University Publications Editor*
 B.A., North Carolina (Chapel Hill); M.B.A., Wake Forest

Development and Alumni Activities

G. William Joyner Jr. (1969) *Vice President for Development*
 B.A., Wake Forest

Julius H. Corpening (1969) B.A., Wake Forest; B.D., Southern Baptist Seminary	<i>Director of Development and Estate Planning</i>
Robert D. Mills (1972) B.A., Wake Forest	<i>Director of Alumni Activities</i>
Robert T. Baker (1978) B.A., M.S., George Peabody	<i>Director of Corporate Relations and the Law Fund</i>
Minta Aycock McNally (1978) B.A., Wake Forest	<i>Director of the College Fund</i>
Robert D. Thompson (1982) B.A., Wake Forest	<i>Assistant to the Director of Alumni Activities</i>
James Reid Morgan (1980) B.A., J. D., Wake Forest	<i>Foundations Officer</i>

Financial Affairs

John G. Williard (1958) B.S., North Carolina (Chapel Hill); C.P.A., North Carolina	<i>Vice President and Treasurer</i>
Carlos O. Holder (1969) B.B.A., Wake Forest	<i>Controller and Assistant Treasurer</i>
W. Derald Hagen (1978) B.S., Virginia Polytechnic	<i>Assistant Controller</i>

Libraries

Ferrill G. Berthrong (1964) B.A., Tufts; M.A., Fletcher; Ph.D., Pennsylvania	<i>Director of Libraries</i>
Richard J. Murdoch (1966) B.A., Pennsylvania Military; M.S. in L.S., Villanova	<i>Assistant to the Director and Curator of Rare Books</i>
Kenneth A. Zick II (1975) B.A., Albion; J.D., Wayne State; M.L.S., Michigan	<i>Director of Law Library Services</i>
William L. Wilson (1960) B.A., Coker; B.S. in L.S., George Peabody	<i>Librarian of the School of Law</i>
Dean B. Hopson (1970) B.S. in Ed., Murray State; M.S. in L.S., George Peabody; M.B.A., Wake Forest	<i>Librarian of the Babcock Graduate School of Management</i>
Michael D. Sprinkle (1972) B.A., M.S. in L.S., North Carolina (Chapel Hill)	<i>Librarian of the Bowman Gray School of Medicine</i>

Athletics

Eugene Hooks (1956) B.S., Wake Forest; M.Ed., North Carolina (Chapel Hill); Ed.D., George Peabody	<i>Director of Athletics</i>
Brothie Casey (1949) B.S., North Carolina (Greensboro); M.A., North Carolina (Chapel Hill)	<i>Director of Women's Athletics</i>

Other Administrative Offices

- Nicholas B. Bragg (1970) *Executive Director of Reynolda House*
B.A., Wake Forest
- Richard T. Clay (1956) *Director of University Stores*
B.B.A., Wake Forest
- Thomas M. Elmore (1962) *Director of Counselor Education*
B.A., Wake Forest; M.A., George Peabody; Ph.D., Ohio State
- Victor Faccinto (1978) *Director of the Art Gallery*
B.A., M.A., California
- Paul M. Gross Jr. (1959) *Coordinator of the Honors Program*
B.S., Duke; Ph.D., Brown
- David W. Hadley (1966) *Coordinator of London Program*
B.A., Wake Forest; A.M., Ph.D., Harvard
- David B. Levy (1976) *Director of Concerts*
B.M., M.A., Ph.D., Eastman
- John H. Litcher (1973) *Director of Teacher Education*
B.S., Winona State; M.A., Ph.D., Minnesota
- Rodney Meyer (1980) *Director of the Office for Grants and Contracts*
B.A., Brown; M.A., Ph.D., Minnesota
- John V. Mochnick (1976) *Director of Choirs*
B.M., Heidelberg; M.M., Indiana; D.M.A., Cincinnati
- Harold S. Moore (1953) *Director of the Physical Plant*
B.M.E., Virginia
- Herman J. Preseren (1953) *Director of the Educational Media Center*
B.S., California State (Pennsylvania); M.A., Columbia;
Ph.D., North Carolina (Chapel Hill)
- Henry B. Stokes (1977) *Director of Denominational Relations*
B.A., Wake Forest; Th.B., Southern Baptist Seminary
- Harold C. Tedford (1965) *Director of Theater*
B.A., Ouachita; M.A., Arkansas; Ph.D., Louisiana State
- David Williams *Director of Debate*
B.A., M.A., North Carolina (Chapel Hill)
- Donald H. Wolfe (1968) *Associate Director of Theater*
B.S., M.S., Southern Illinois; Ph.D., Cornell

The Undergraduate Faculties

Date following name indicates year of appointment.

- Charles M. Allen (1941) *Professor of Biology*
B.S., M.S., Wake Forest; Ph.D., Duke
- Ralph D. Amen (1962) *Professor of Biology*
B.A., M.A., Northern Colorado; M.B.S., Ph.D., Colorado
- John L. Andronica (1969) *Associate Professor of Classical Languages*
B.A., Holy Cross; M.A., Boston College; Ph.D., Johns Hopkins
- John William Angell (1955) *Professor of Religion*
B.A., Wake Forest; S.T.M., Andover Newton; Th.M., Ph.D., Southern Baptist Seminary
- Bianca Artom (1975) *Lecturer in Romance Languages*
- Brian M. Austin (1975) *Lecturer in Psychology*
B.A., Monmouth; Ph.D., Southern Illinois
- H. Wallace Baird (1963) *Professor of Chemistry*
B.A., Berea; Ph.D., Wisconsin
- Susan E. Balinsky (1980) *Instructor in Physical Education*
B.S., S.U.N.Y. (Oneonta); M.S., Indiana
- E. Pendleton Banks (1954) *Professor of Anthropology*
B.A., Furman; A.M., Ph.D., Harvard
- James P. Barefield (1963) *Associate Professor of History*
B.A., M.A., Rice; Ph.D., Johns Hopkins
- Richard C. Barnett (1961) *Professor of History*
B.A., Wake Forest; M.Ed., Ph.D., North Carolina (Chapel Hill)
- John V. Baxley (1968) *Professor of Mathematics*
B.S., M.S., Georgia Tech; Ph.D., Wisconsin
- Catherine-Anne Beaudry (1981) *Instructor in Romance Languages*
B.A., Catholic; M.A., Columbia
- W. Kenneth Bechtel (1981) *Instructor in Sociology*
B.A., M.A., North Dakota
- Robert C. Beck (1959) *Professor of Psychology*
B.A., Ph.D., Illinois
- Donald B. Bergey (1978) *Instructor in Physical Education*
B.S., M.A., Wake Forest
- Ferrill G. Berthrong (1964) *Associate Professor of History*
B.A., Tufts; M.A., Fletcher; Ph.D., Pennsylvania
- Leborah L. Best (1972, 1978) *Assistant Professor of Psychology*
B.A., M.A., Wake Forest; Ph.D., North Carolina (Chapel Hill)

*On leave, 1981-82

*Part-time

- Ramunas Bigelis (1979) *Assistant Professor of Biology*
B.S., Illinois (Chicago); Ph.D., Purdue
- ***David Bindman (1977) *Lecturer in Art History*
B.A., M.A., Oxford; Ph.D., Courtauld
(London)
- David G. Brailow (1979) *Visiting Assistant Professor of English*
B.A., Amherst; M.A., Ph.D., Oregon
- Germaine Bree (1973) *Kenan Professor of Humanities*
Licence, E.E.S., Agregation, Paris; Litt.D., Smith, Mount Holyoke, Alleghany
Duke, Oberlin, Dickinson, Rutgers, Wake Forest, Brown, Wisconsin, New York
Massachusetts, Kalamazoo; L.H.D., Wilson, Colby, Michigan, Davis and Elkins
LL.D., Middlebury
- Robert W. Brehme (1959) *Professor of Physics*
B.S., Roanoke; M.S., Ph.D., North Carolina
- *Carole L. Browne (1980) *Assistant Professor of Biology*
B.S., Hartford; Ph.D., Syracuse
- *Robert A. Browne (1980) *Assistant Professor of Biology*
B.S., M.S., Dayton; Ph.D., Syracuse
- David B. Broyles (1966) *Associate Professor of Political Science*
B.A., Chicago; B.A., Florida; M.A., Ph.D., California (Los Angeles)
- George McLeod Bryan (1956) *Professor of Religion*
B.A., M.A., Wake Forest; B.D., Ph.D., Yale
- Shasta M. Bryant (1966) *Professor of Romance Languages*
B.A., M.A., Ph.D., North Carolina (Chapel Hill)
- Julian Lopez Bueno (1978) *Visiting Assistant Professor of Romance Languages*
Ph.B., Gregorian (Rome); B.A., Pan-American;
M.A., Ph.D., Texas Tech
- Jerry M. Burger (1980) *Assistant Professor of Psychology*
B.S., M.S., California State (Fresno); Ph.D., Missouri (Columbia)
- **Julian C. Burroughs Jr. (1958) *Professor of Speech Communication*
B.A., Wake Forest; M.A., Ph.D., Michigan
- ***Bonnie M. Carey (1982) *Instructor in Romance Languages*
B.A., Boston; M.A.T., Assumption
- Candide Carrasco (1981) *Instructor in Romance Languages*
L es L., M. es L., Montpellier (France)
- Richard D. Carmichael (1971) *Professor of Mathematics*
B.S., Wake Forest; M.A., Ph.D., Duke
- ***Wallace Carroll (1974) *Sam J. Ervin Jr. University Lecturer*
B. Litt., Marquette; LL.D., Duke; Litt.D., Wake Forest, Marquette

***Part-time, spring 1982

*Part-time

**On leave, spring 1982

- John A. Carter Jr. (1961) *Professor of English*
B.A., Virginia; M.A., Ph.D., Princeton
- Dorothy Casey (1949) *Assistant Professor of Physical Education*
B.S., North Carolina (Greensboro); M.A., North Carolina (Chapel Hill)
- David W. Catron (1963) *Associate Professor of Psychology*
B.A., Furman; Ph.D., George Peabody
- Cynthia L. Caywood (1981) *Instructor in English*
B.A., Kansas; M.A., Exeter (England)
- Glenn L. Clark Jr. (1976) *Lecturer in Business*
B.S., Ohio State; M.B.A., Kentucky
- Maxine L. Clark (1980) *Assistant Professor of Psychology*
B.A., Cincinnati; A.M., Ph.D., Illinois
- Marvin S. Coats (1976) *Lecturer in Art*
B.S.A., East Texas State; M.F.A., Oklahoma
- John E. Collins (1970) *Associate Professor of Religion*
B.S., M.S., Tennessee; B.D., Southeastern Baptist Seminary; Ph.D., Princeton
- Gary A. Cook (1975) *Instructor in Art*
B.F.A., Michigan State; M.F.A., Northern Illinois
- Leon P. Cook Jr. (1957) *Associate Professor of Accountancy*
B.S., Virginia Polytechnic; M.S., Tennessee; C.P.A., Arkansas
- Nancy J. Cotton (1977) *Associate Professor of English*
B.A., Texas; M.A., Wisconsin; Ph.D., Columbia
- Cyclone Covey (1968) *Professor of History*
B.A., Ph.D., Stanford
- Patricia M. Cunningham (1978) *Assistant Professor of Education*
B.A., Rhode Island; M.S., Florida State; Ed.S. Indiana State; Ph.D., Georgia
- Janine B. Cutchin (1981) *Instructor in Anthropology*
B.A., North Carolina (Chapel Hill); M.A., George Washington
- Sayeste A. Daser (1978) *Assistant Professor of Business*
B.A., Middle East Tech (Ankara); M.S., Ege (Izmir); Ph.D., North Carolina (Chapel Hill)
- J. William Dellastatious (1975) *Lecturer in Physical Education*
B.S., M.S., Missouri
- Arun P. Dewasthali (1975) *Associate Professor of Business*
B.S., Bombay; M.S., Ph.D., Delaware
- John F. Dimmick (1961) *Associate Professor of Biology*
B.S., M.S., Western Illinois; Ph.D., Illinois
- Ronald V. Dimock Jr. (1970) *Associate Professor of Biology*
B.A., New Hampshire; M.S., Florida State; Ph.D., California (Santa Barbara)

*On leave, 1981-82

**On leave, spring 1982

***Part-time

- *James H. Dodding (1979) *Visiting Lecturer in Theatre*
- **Joseph Dodson (1977) *Visiting Lecturer in Education*
B.A., Western Carolina; M.Ed., Ed.D., Georgia
- Jerome R. Dollard (1980) *Adjunct Professor of Religion*
B.A., St. Benedict's; S.T.B., Belmont Abbey; M.A., Ph.D., Catholic
- †Thomas E. Dougherty Jr. (1977) *Visiting Lecturer in Religion*
B.A., Wake Forest; M.Div., Ph.D., Southern Baptist Seminary
- Robert H. Dufort (1961) *Professor of Psychology*
B.A., Ph.D., Duke
- Robert Allen Dyer (1956) *Professor of Religion*
B.A., Louisiana State; Th.M., Ph.D., Southern Baptist Seminary
- John R. Earle (1963) *Professor of Sociology*
B.A., Wake Forest; M.A., Ph.D., North Carolina (Chapel Hill)
- †C. Drew Edwards (1980) *Visiting Assistant Professor of Psychology*
B.A., Furman; M.A., Wake Forest; Ph.D., Florida State
- ††Donald L. Ellis (1981) *Visiting Instructor in Education*
B.M.Ed., Houghton; M.M.Ed., North Carolina (Greensboro)
- Leo Ellison Jr. (1957) *Assistant Professor of Physical Education*
B.S., M.S., Northwestern State
- Thomas M. Elmore (1962) *Professor of Counseling Psychology*
B.A., Wake Forest; M.A., George Peabody; Ph.D., Ohio State
- Gerald W. Esch (1965) *Professor of Biology*
B.S., Colorado College; M.S., Ph.D., Oklahoma
- Andrew V. Ettin (1977) *Associate Professor of English*
B.A., Rutgers; M.A., Ph.D., Washington (St. Louis)
- Herman E. Eure (1974) *Associate Professor of Biology*
B.S., Maryland State; Ph.D., Wake Forest
- David K. Evans (1966) *Associate Professor of Anthropology*
B.S., Tulane; Ph.D., California (Berkeley)
- Stephen Ewing (1971) *Associate Professor of Business*
B.S., Howard Payne; M.B.A., Baylor; D.B.A., Texas Tech
- ***Victor Faccinto (1981) *Instructor in Art*
B.A., M.A., California State (Sacramento)
- Philippe R. Falkenberg (1969) *Associate Professor of Psychology*
B.A., Queen's (Ontario); Ph.D., Duke

*Spring 1982

**Part-time, spring 1982

†Part-time

†† Part-time, fall, 1981

***Part-time

- Doranne Fenoaltea (1977) *Associate Professor of Romance Languages*
B.A., Mount Holyoke; A.M., Ph.D., Harvard
- Jack D. Fleer (1964) *Professor of Politics*
B.A., Oklahoma Baptist; M.S., Florida State; Ph.D., North Carolina (Chapel Hill)
- Doyle R. Fosso (1964) *Professor of English*
A.B., Harvard; M.A., Michigan; Ph.D., Harvard
- Ralph S. Fraser (1962) *Professor of German*
B.A., Boston; M.A., Syracuse; Ph.D., Illinois
- Donald E. Frey (1972) *Associate Professor of Economics*
B.A., Wesleyan; M.Div., Yale; Ph.D., Princeton
- Caroline S. Fullerton (1969) *Instructor in Theatre Arts*
B.A., Rollins; M.A., Texas Christian
- Charles V. Ganelin, (1980) *Instructor in Romance Languages*
A.B., Denison; M.A., Chicago
- vey C. Gentry (1949) *Professor of Mathematics*
B.S., Wake Forest; B.S., New York; M.A., Ph.D., Duke
- . Whitfield Gibbons (1971) *Adjunct Associate Professor of Biology*
B.S., M.A., Alabama; Ph.D., Michigan State
- Christopher Giles (1951) *Assistant Professor of Music*
B.S., Florida Southern; M.A., George Peabody
- Kathleen Glenn (1974) *Associate Professor of Romance Languages*
B.A., M.A., Ph.D., Stanford
- ae Jean Go (1980) *Instructor in Speech Communication
and Theatre Arts*
B.A., Tennessee; M.A., Illinois
- Richard T. Godfrey (1981) *Lecturer in Art (London)*
B.A., Chelsea School of Art (England)
- alkrishna Govind Gokhale (1960) *Professor of History and Asian Studies*
B.A., M.A., Ph.D., Bombay
- ouis R. Goldstein (1979) *Assistant Professor of Music*
B.M., Oberlin; M.F.A., California Institute of the Arts; D.M.A., Eastman
- uben L. Gomez (1981) *Instructor in Romance Languages*
B.A., New York; M.A., South Florida
- arold O. Goodman (1958) *Adjunct Professor of Biology*
B.A., M.A., Ph.D., Minnesota
- Thomas F. Gossett (1967) *Professor of English*
B.A., M.A., Southern Methodist; Ph.D., Minnesota
- aul M. Gross Jr. (1959) *Associate Professor of Chemistry*
B.S., Duke; Ph.D., Brown

*Part-time

*On leave, fall 1981

†On leave, spring 1982

*Part-time, fall 1982

- William H. Gulley (1966) *Associate Professor of Sociology*
B.A., M.A., Ph.D., North Carolina (Chapel Hill)
- David W. Hadley (1966) *Associate Professor of History*
B.A., Wake Forest; A.M., Ph.D., Harvard
- Gary W. Hall *Instructor in Physical Education*
A.B., Atlantic Christian; M.A. Wake Forest
- *Claire H. Hammond (1978) *Instructor in Economics*
B.A., Mary Washington; Ph.D., Virginia
- J. Daniel Hammond (1978) *Assistant Professor of Economics*
B.A., Wake Forest; Ph.D., Virginia
- Emmett Willard Hamrick (1952) *Professor of Religion*
B.A., North Carolina (Chapel Hill); Ph.D., Duke
- Phillip J. Hamrick Jr. (1956) *Professor of Chemistry*
B.S., Morris Harvey; Ph.D., Duke
- Carl V. Harris (1956) *Professor of Classical Languages*
B.A., Wake Forest; B.D., S.T.M., Yale; Ph.D., Duke
- Catherine T. Harris (1980) *Assistant Professor of Sociology*
A.B., Lenoir Rhyne; M.A., Duke; Ph.D., Georgia
- *Lucille S. Harris (1957) *Instructor in Music*
B.A., B.M., Meredith
- **Negley Boyd Harte (1978) *Lecturer in History (London)*
B.S., London School of Economics
- Ysbrand Haven (1965) *Professor of Physics*
Candidate, Doctorandus, Doctor, Rijks (Netherlands)
- Elmer K. Hayashi (1973) *Associate Professor of Mathematics*
B.A., California (Davis); M.S., San Diego State; Ph.D., Illinois
- Michael D. Hazen (1974) *Associate Professor of Speech Communication*
B.A., Seattle Pacific; M.A., Wake Forest; Ph.D., Kansas
- Robert A. Hedin (1980) *Visiting Lecturer in English*
B.A., Luther; M.F.A., Alaska
- Roger A. Hegstrom (1969) *Professor of Chemistry*
B.A., St. Olaf; A.M., Ph.D., Harvard
- ***Robert M. Helm (1940) *Professor of Philosophy*
B.A., Wake Forest; M.A., Ph.D., Duke
- J. Edwin Hendricks (1961) *Professor of History*
B.A., Furman; M.A., Ph.D., Virginia
- Marcus B. Hester (1963) *Professor of Philosophy*
B.A., Wake Forest; Ph.D., Vanderbilt

*Part-time

**Part-time, spring 1982

***On leave, spring 1982

- Gregg L. Hill (1982) *Assistant Professor of Military Science*
B.S., North Carolina (Greensboro)
- David Allen Hills (1960) *Associate Professor of Psychology*
B.A., Kansas; M.A., Ph.D., Iowa
- Charles S. Hinson Jr. (1981) *Instructor in Mathematics*
B.S., M.S., Wake Forest
- Willie L. Hinze (1975) *Associate Professor of Chemistry*
B.S., M.A., Sam Houston State; Ph.D., Texas A & M
- Fred L. Horton Jr. (1970) *Associate Professor of Religion*
B.A., North Carolina (Chapel Hill); B.D., Union Seminary; Ph.D., Duke
- William L. Hottinger (1970) *Professor of Physical Education*
B.S., Slippery Rock; M.S., Ph.D., Illinois
- Fredric T. Howard (1966) *Professor of Mathematics*
B.A., M.A., Vanderbilt; Ph.D., Duke
- Sarah Hutslar (1977) *Visiting Assistant Professor of Physical Education*
B.S., Ohio State; M.Ed., Miami; Ph.D., Ohio State
- Richard P. Hydell (1981) *Assistant Professor of Economics*
B.A., Oberlin; Ph.D., Massachusetts Institute of Technology
- Delmer P. Hylton (1949) *Professor of Accountancy*
B.S., M.B.A., Indiana; C.P.A., Indiana
- Charles F. Jackels (1977) *Assistant Professor of Chemistry*
B. Chem., Minnesota; Ph.D., Washington
- Susan C. Jackels (1977) *Assistant Professor of Chemistry*
B.A., Carleton; Ph.D., Washington
- Mordecai J. Jaffe (1980) *Babcock Professor of Botany*
B.S., C.C.N.Y.; Ph.D., Cornell
- David E. Janney (1980) *Assistant Professor of Military Science*
B.S., University of Tennessee (Knoxville)
- Patricia Adams Johansson (1969) *Instructor in English*
B.A., Winston-Salem State; M.A., Wake Forest
- W. Dillon Johnston (1973) *Associate Professor of English*
B.A., Vanderbilt; M.A., Columbia; Ph.D., Virginia
- Richard R. M. Jones (1980) *Assistant Professor of Chemistry*
B.S., Tennessee; Ph.D., California Institute of Technology
- Catherine A. Jourdan (1981) *Adjunct Instructor in Psychology*
B.A., East Carolina; M.Ed., Wake Forest
- Victor Kamendrowsky (1980) *Instructor in History*
B.A., M.A., San Francisco State

*On leave, spring 1982

*Spring 1982

†On leave 1981-82

†Part-time

- Jay R. Kaplan (1981) *Adjunct Assistant Professor of Anthropology*
B.A., Swarthmore; M.A., Ph.D., Northwestern
- Paul H. D. Kaplan (1980) *Instructor in Art*
B.A., Hampshire; M.A., Boston
- Alonzo W. Kenion (1956) *Professor of English*
B.A., M.A., Ph.D., Duke
- Ralph C. Kennedy III (1976) *Assistant Professor of Philosophy*
B.A., Ph.D., California (Berkeley)
- William C. Kerr (1970) *Associate Professor of Physics*
B.S., Wooster; Ph.D., Cornell
- Ellen E. Kirkman (1975) *Associate Professor of Mathematics*
B.A., Wooster; M.A., M.S., Ph.D., Michigan State
- Robert Knott (1975) *Associate Professor of Art*
B.A., Stanford; M.A., Illinois; Ph.D., Pennsylvania
- Raymond E. Kuhn (1968) *Professor of Biology*
B.S., Carson-Newman; Ph.D., Tennessee
- James Kuzmanovich (1972) *Associate Professor of Mathematics*
B.S., Rose Polytechnic; Ph.D., Wisconsin
- Hugo C. Lane (1973) *Assistant Professor of Biology*
Licentiate of the Biological Sciences, Doctorate of the Biological Sciences, Geneva
- Annette LeSiege (1975) *Associate Professor of Music*
B.A., M.A., San Jose State; Ph.D., Eastman
- David B. Levy (1976) *Assistant Professor of Music*
B.M., M.A., Ph.D., Eastman
- Charles M. Lewis (1968) *Associate Professor of Philosophy*
B.A., Wake Forest; Ph.D., Vanderbilt; Th.M., Harvard
- Robert H. Lewis (1979) *Assistant Professor of Military Science*
B.S., North Carolina A & T
- John H. Litcher (1973) *Associate Professor of Education*
B.S., Winona State; M.A., Ph.D., Minnesota
- Allan D. Loudon (1977) *Instructor in Speech Communication*
B.A., Montana State; M.A., Montana
- Robert W. Lovett (1962, 1968) *Associate Professor of English*
B.A., Oglethorpe; M.A.T., Ph.D., Emory
- Murdina D. MacDonald (1981) *Instructor in Religion*
B.A., Hawaii; M. Div., Southeastern Baptist Seminary
- Bruce D. MacQueen (1980) *Visiting Assistant Professor of Classical Language*
B.A., Oklahoma; M.A., California (Santa Barbara);
Ph.D. Iowa
- Barry G. Maine (1981) *Instructor in English*
B.A., Virginia; M.A., North Carolina (Chapel Hill)
- Sam T. Manoogian (1977) *Adjunct Instructor in Psychology*
B.A., Duke; M.A., Wake Forest; Ph.D., St. Louis

- Milorad R. Margitic (1978) *Associate Professor of Romance Languages*
M.A., Leiden (Netherlands); Ph.D., Wayne State
- Gregorio C. Martin (1976) *Associate Professor of Romance Languages*
Diplome, Salamanca (Spain); M.A., Ph.D., Pittsburgh
- George Eric Matthews Jr. (1979) *Assistant Professor of Physics*
B.S., Ph.D., North Carolina (Chapel Hill)
- J. Gaylord May (1961) *Professor of Mathematics*
B.S., Wofford; M.A., Ph.D., Virginia
- Jo Whitten May (1972) *Visiting Assistant Professor of Speech Communication*
B.S., Virginia; M.A., Ph.D., North Carolina (Greensboro)
- W. Graham May (1961) *Professor of Mathematics*
B.S., Wofford; M.A., Ph.D., Virginia
- Donna Mayer-Martin (1976) *Assistant Professor of Music*
B.M., St. Mary (Kansas); M.M., Ph.D., Cincinnati
- Wesley L. McBride (1980) *Assistant Professor of Military Science*
B.S., Virginia Polytechnic
- James C. McDonald (1960) *Professor of Biology*
B.A., Washington (St. Louis); M.A., Ph.D., Missouri
- James G. McDowell (1965) *Associate Professor of History*
B.A., Colgate; Ph.D., Johns Hopkins
- Dolly A. McPherson (1974) *Lecturer in English*
B.A., Southern; M.A., Boston
- Stephen Philip Messier (1981) *Assistant Professor of Physical Education*
B.S., M.S., Rhode Island; Ph.D., Temple
- Harry B. Miller (1947) *Professor of Chemistry*
B.S., Ph.D., North Carolina (Chapel Hill)
- Joseph O. Milner (1969) *Associate Professor of Education*
B.A., Davidson; M.A., Ph.D., North Carolina (Chapel Hill)
- Carlton T. Mitchell (1961) *Professor of Religion*
B.A., Wake Forest; B.D., Yale; S.T.M., Union Seminary; Ph.D., New York
- John V. Mochnick (1976) *Assistant Professor of Music*
B.M., Heidelberg; M.M., Indiana; D.M.A., Cincinnati
- John C. Moorhouse (1969) *Professor of Economics*
B.A., Wabash; Ph.D., Northwestern
- Carl C. Moses (1964) *Associate Professor of Politics*
A.B., William and Mary; M.A., Ph.D., North Carolina (Chapel Hill)
- William M. Moss (1971) *Associate Professor of English*
B.A., Davidson; Ph.D., North Carolina (Chapel Hill)

*On leave, spring 1982

*Part-time

- Thomas E. Mullen (1957) *Professor of History*
B.A., Rollins; M.A., Ph.D., Emory
- Matthew P. Murray Jr. (1981) *Professor of Military Science*
B.A., Florida State; M.A., Middlebury
- Rebecca Myers (1981) *Instructor in Physical Education*
B.S., M.A., Ball State
- Candelas M. Newton (1978) *Visiting Assistant Professor
of Romance Languages*
B.A., Salamanca (Spain); M.A., Ph.D., Pittsburgh
- Linda N. Nielsen (1974) *Assistant Professor of Education*
B.A., Stetson; M.S., Ed.D., Tennessee
- Ronald E. Nofle (1967) *Professor of Chemistry*
B.S., New Hampshire; Ph.D., Washington
- John W. Nowell (1945) *Professor of Chemistry*
B.S., Wake Forest; Ph.D., North Carolina (Chapel Hill)
- James C. O'Flaherty (1947) *Professor of German*
B.A., Georgetown College; M.A., Kentucky; Ph.D., Chicago
- A. Thomas Olive (1961) *Associate Professor of Biology*
B.S., Wake Forest; M.A., Ph.D., North Carolina State
- Gillian Rose Overing (1979) *Visiting Assistant Professor of English*
B.A., Lancaster (England); M.A., Ph.D., S.U.N.Y. (Buffalo)
- Jeanne Owen (1956) *Professor of Business Law*
B.S., North Carolina (Greensboro); M.C.S., Indiana; J.D., North Carolina (Chapel Hill)
- John E. Parker Jr. (1950) *Professor of Education and Romance Languages*
B.A., Wake Forest; M.A., Ph.D., Syracuse
- Willie Pearson Jr. (1980) *Assistant Professor of Sociology*
B.A., Wiley; M.A., Atlanta; Ph.D., Southern Illinois (Carbondale)
- Philip J. Perricone (1967) *Associate Professor of Sociology*
B.S., M.A., Florida; Ph.D., Kentucky
- Percival Perry (1939, 1947) *Professor of History*
B.A., Wake Forest; M.A., Rutgers; Ph.D., Duke
- David A. Petreman (1981) *Instructor in Romance Languages*
B.A., Illinois Wesleyan; M.A., Iowa
- Elizabeth Phillips (1957) *Professor of English*
B.A., North Carolina (Greensboro); M.A., Iowa; Ph.D., Pennsylvania
- *Terisio Pignatti (1971) *Visiting Professor of Art History
(Venice)*
Ph.D., Padua
- Gay S. Pitts (1981) *Instructor in Education*
B.S., East Carolina

- Margaret F. Plemmons (1982) *Instructor in Chemistry*
B.A., George Washington; M.S., West Chester State
- Andrew W. Polk III (1977) *Instructor in Art*
B.F.A., Memphis State; M.F.A., Indiana
- Lee Harris Potter (1965) *Professor of English*
B.A., M.A., Ph.D., North Carolina (Chapel Hill)
- Herman J. Preseren (1953) *Professor of Education*
B.S., California State (Pennsylvania); M.A., Columbia;
Ph.D., North Carolina (Chapel Hill)
- Gregory D. Pritchard (1968) *Professor of Philosophy*
B.A., Oklahoma Baptist; B.D., Southern Baptist Seminary; Ph.D., Columbia
- Teresa Radomski (1977) *Instructor in Music*
B.M., Eastman; M.M., Colorado
- J. Don Reeves (1967) *Professor of Education*
B.A., Mercer; B.D., Th.M., Southern Baptist Seminary; Ed.D., Columbia
- Jon M. Reinhardt (1964) *Associate Professor of Politics*
B.A., Birmingham-Southern; M.A., Ph.D., Tulane
- Walter J. Rejeski Jr. (1978) *Assistant Professor of Physical Education*
B.S., Norwich; M.A., Ph.D., Connecticut
- Mark Rigney Reynolds (1979) *Instructor in English*
B.A., William and Mary; M.A., Exeter (England)
- Paul M. Ribisl (1973) *Professor of Physical Education*
B.S., Pittsburgh; M.A., Kent State; Ph.D., Illinois
- C. H. Richards Jr. (1952) *Professor of Politics*
B.A., Texas Christian; M.A., Ph.D., Duke
- Stephen H. Richardson (1963) *Adjunct Professor of Biology*
B.A., California; M.S., Ph.D., Southern California
- Charles L. Richman (1968) *Professor of Psychology*
B.A., Virginia; M.A., Yeshiva; Ph.D., Cincinnati
- Stephen P. Richters (1979) *Instructor in Mathematics*
B.S., Vassar; M.S., Brown
- Leonard P. Roberge (1974) *Assistant Professor of Education*
B.A., New Hampshire; M.A., Atlanta; Ed.D., Maine
- Mary Frances Robinson (1952) *Professor of Romance Languages*
B.A., Wilson; M.A., Ph.D., Syracuse
- Eva Marie Rodtwitt (1966) *Lecturer in Romance Languages*
Can. Philol., Oslo (Norway)
- Michael Roman (1973) *Assistant Professor of English*
A.B., Harvard; M.A., Ph.D., Pennsylvania

*Part-time, spring 1982

**On leave, 1981-82

- Robert P. Rooney (1981) *Visiting Assistant Professor of Chemistry*
B.S., North Carolina State; Ph.D., North Carolina (Chapel Hill)
- **John D. Royster (1981)** *Instructor in Business and Accounting*
B.A., Virginia Military Institute; M.A., Virginia Polytechnic
- **S. Gayle Russell (1981)** *Visiting Lecturer in Anthropology*
B.A., Missouri (Columbia); M.A. South Florida
- Wilmer D. Sanders (1954, 1964) *Associate Professor of German*
B.A., Muhlenberg; M.A., Ph.D., Indiana
- John W. Sawyer (1956) *Professor of Mathematics*
B.A., M.A., Wake Forest; M.A., Ph.D., Missouri
- Donald O. Schoonmaker (1965) *Associate Professor of Political Science*
B.A., Wake Forest; M.A., Ph.D., Princeton
- ***Marianne A. Schubert (1979)** *Lecturer in Education*
B.A., Dayton; M.A., Ph.D., Southern Illinois
- Richard D. Sears (1964) *Associate Professor of Political Science*
B.A., Clark; M.A., Ph.D., Indiana
- Ben M. Seelbinder (1959) *Professor of Mathematics*
B.A., Mississippi Delta State; M.A., Ph.D., North Carolina (Chapel Hill)
- ***Dorothy Jean Carter Seeman (1976)** *Visiting Assistant Professor of Psychology*
B.A., Wake Forest; B.S., Ph.D., Georgia
- Timothy F. Sellner (1970) *Associate Professor of German*
B.A., Michigan; M.A., Wayne State; Ph.D., Michigan
- Bynum G. Shaw (1965) *Lecturer in Journalism*
B.A., Wake Forest
- Curtis L. Shelton (1981) *Assistant Professor of Military Science*
B.S., East Tennessee State
- Howard W. Shields (1958) *Professor of Physics*
B.S., North Carolina (Chapel Hill); M.S., Pennsylvania State; Ph.D., Duke
- Franklin R. Shirley (1948) *Professor of Speech Communication*
B.A., Georgetown; M.A., Columbia; Ph.D., Florida
- Richard L. Shoemaker (1950) *Professor of Romance Languages*
B.A., Colgate; M.A., Syracuse; Ph.D., Virginia
- Robert N. Shorter (1958) *Professor of English*
B.A., Union College; M.A., Ph.D., Duke
- Michael L. Sinclair (1968) *Associate Professor of History*
B.A., Wake Forest; A.M., Ph.D., Stanford
- David L. Smiley (1950) *Professor of History*
B.A., M.A., Baylor; Ph.D., Wisconsin

****Part-time, fall 1981**

*****Part-time**

- J. Howell Smith (1965) *Associate Professor of History*
B.A., Baylor; M.A., Tulane; Ph.D., Wisconsin
- Kathleen B. Smith (1981) *Visiting Assistant Professor of Politics*
B.A., Baldwin-Wallace; M.A., Ph.D., Purdue
- Margaret Supplee Smith (1979) *Associate Professor of Art*
B.S., Missouri; M.A., Case Western Reserve; Ph.D., Brown
- Cecelia H. Solano (1977) *Assistant Professor of Psychology*
B.A., Radcliffe; M.A., Ph.D., Johns Hopkins
- Blanche C. Speer (1972) *Associate Professor of Linguistics*
B.A., Howard Payne; M.A., Ph.D., Colorado
- Chris Stanley (1978) *Lecturer in Theatre Arts (London)*
B.A., M.A., Bristol (Great Britain)
- John Steele (1980) *Lecturer in Speech Communication and Theatre Arts*
B.A., M.F.A., Humboldt State
- James A. Steintrager (1969) *Professor of Politics*
B.A., Notre Dame; M.A., Ph.D., Chicago
- Henry Smith Stroupe (1937) *Professor of History*
B.S., M.A., Wake Forest; Ph.D., Duke
- David A. Stump (1977) *Adjunct Instructor in Psychology*
B.A., Trinity (Texas); M.A., Ph.D., Houston
- Joanne Margaret Sulek (1981) *Instructor in Mathematics*
B.S., M.A., Wake Forest
- Anna-Vera Sullam (1972) *Instructor in Romance Languages (Venice)*
B.A., Padua
- Robert L. Sullivan (1962) *Professor of Biology*
B.A., Delaware; M.S., Ph.D., North Carolina State
- Elizabeth A. Sutherland (1982) *Instructor in Art*
B.F.A., Boston; M.F.A., Temple
- Charles H. Talbert (1963) *Professor of Religion*
B.A., Howard; B.D., Southern Baptist Seminary; Ph.D., Vanderbilt
- Thomas C. Taylor (1971) *Associate Professor of Accountancy*
B.S., M.A., North Carolina (Chapel Hill); Ph.D., Louisiana State;
C.P.A., North Carolina
- Harold C. Tedford (1965) *Professor of Theatre Arts*
B.A., Ouachita; M.A., Arkansas; Ph.D., Louisiana State
- Stanton K. Tefft (1964) *Professor of Anthropology*
B.A., Michigan State; M.S., Wisconsin; Ph.D., Minnesota

*Part-time, fall 1981

**Part-time

†Died, July 23, 1981

††Part-time, spring 1982

- Olive S. Thomas (1978) *Instructor in Business*
B.S., Wake Forest; M.B.A., North Carolina (Greensboro); C.P.A., North Carolina
- **Anne S. Tillett (1956, 1960) *Professor of Romance Language*
B.A., Carson-Newman; M.A., Vanderbilt; Ph.D., Northwestern
- Lowell R. Tillett (1956) *Professor of History*
B.A., Carson-Newman; M.A., Columbia; Ph.D., North Carolina (Chapel Hill)
- *Richard I. Tirrell (1977) *Visiting Lecturer in Education*
B.S., Purdue; M.S., Kansas State
- Harry B. Titus Jr. (1981) *Instructor in Art*
B.A., Wisconsin (Milwaukee); M.F.A., Princeton
- Ralph B. Tower (1980) *Assistant Professor of Accounting*
B.A., Ph.D., North Carolina (Chapel Hill); M.B.A., Cornell
- **Sylvia Trelles (1977) *Instructor in Romance Language*
B.A., Ripon; M.A., Michigan
- Robert W. Ulery Jr. (1971) *Associate Professor of Classical Language*
B.A., M.A., Ph.D., Yale
- ***Robert L. Utley Jr. (1978) *Visiting Assistant Professor of Political Science*
B.A., Wake Forest; M.A., Ph.D., Duke
- Marcellus E. Waddill (1962) *Professor of Mathematics*
B.A., Hampden-Sydney; M.A., Ph.D., Pittsburgh
- J. Van Wagstaff (1964) *Professor of Economics*
B.A., Randolph-Macon; M.B.A., Rutgers; Ph.D., Virginia
- James H. Wakeman (1981) *Assistant Professor of Military Science*
B.S.Ed., M.A., NW Missouri State
- David E. Walters (1978) *Assistant Professor of Military Science*
B.S., Florida State
- ***Mary R. Wayne (1980) *Lecturer in Speech Communications and Theatre Art*
B.F.A., Pennsylvania State; M.F.A., Ohio State
- David S. Weaver (1977) *Assistant Professor of Anthropology*
B.A., M.A., Arizona; Ph.D., New Mexico
- Peter D. Weigl (1968) *Professor of Biology*
B.A., Williams; Ph.D., Duke
- Byron R. Wells (1981) *Instructor in Romance Language*
B.A., M.A., Georgia
- Larry E. West (1969) *Associate Professor of German*
B.A., Berea; Ph.D., Vanderbilt
- ***Floyd Edwin Wike *Visiting Assistant Professor of Philosophy*
B.A., Wake Forest; M.A., Ph.D., Pennsylvania State

*Part-time, fall 1981

**On leave, 1981-82

***Part-time

****Spring 1982

- Ian J. Williams (1974) *Associate Professor of History*
 B.A., Stanford; Ph.D., Yale
- George P. Williams (1958) *Professor of Physics*
 B.S., Richmond; M.S., Ph.D., North Carolina (Chapel Hill)
- John E. Williams (1959) *Professor of Psychology*
 B.A., Richmond; M.A., Ph.D., Iowa
- Edwin Graves Wilson (1946, 1951) *Professor of English*
 B.A., Wake Forest; A.M., Ph.D., Harvard
- Donald H. Wolfe (1968) *Associate Professor of Theatre Arts*
 B.S., M.S., Southern Illinois; Ph.D., Cornell
- Frank B. Wood (1971) *Adjunct Associate Professor of Psychology*
 B.A., M.A., Wake Forest; M.Div., Southeastern Baptist Seminary; Ph.D., Duke
- Ralph C. Wood Jr. (1971) *Associate Professor of Religion*
 B.A., M.A., East Texas State; M.A., Ph.D., Chicago
- Ned Woodall (1969) *Associate Professor of Anthropology*
 B.A., M.A., Texas; Ph.D., Southern Methodist
- Raymond L. Wyatt (1956) *Professor of Biology*
 B.S., Wake Forest; M.A., Ph.D., North Carolina (Chapel Hill)
- Michael L. Wyzan (1979) *Assistant Professor of Economics*
 A.B., Miami (Ohio); Ph.D., North Carolina (Chapel Hill)
- W. Buck Yearns Jr. (1945) *Professor of History*
 B.A., Duke; M.A., Georgia; Ph.D., North Carolina (Chapel Hill)
- Richard L. Zuber (1962) *Professor of History*
 B.S., Appalachian; M.A., Emory; Ph.D., Duke

On leave, fall 1981

On leave, 1981-82

Emeriti

Dates following names indicate period of service.

- Harold M. Barrow (1948–1977) *Professor Emeritus of Physical Education*
B.A., Westminster; M.A., Missouri; P.E.D., Indiana
- Dalma Adolph Brown (1941–1973) *Professor Emeritus of English*
B.A., M.A., North Carolina (Chapel Hill)
- Ruth F. Campbell (1962–1974) *Professor Emerita of Spanish*
B.A., North Carolina (Greensboro); M.A., North Carolina (Chapel Hill); Ph.D., Duke
- Marjorie Crisp (1947–1977) *Associate Professor Emerita of Physical Education*
B.S., Appalachian; M.A., George Peabody
- Ethel T. Crittenden (1915–1946) *Librarian Emerita*
- Hugh William Divine (1954–1979) *Professor Emeritus of Law*
B.S., Georgia; M.A., Louisiana State; J.D., Emory; LL.M., S.J.D., Michigan
- *Cronje B. Earp (1940–1971) *Professor Emeritus of Classical Languages*
B.A., Wake Forest; M.A., Ph.D., Columbia
- J. Allen Easley (1928–1963) *Professor Emeritus of Religion*
B.A., Furman; Th.M., Southeastern Baptist Seminary; D.D., Furman
- Walter S. Flory (1963–1980) *Babcock Professor Emeritus of Botany*
B.A., Bridgewater; M.A., Ph.D., Virginia; Sc.D., Bridgewater
- **Edgar Estes Folk (1936–1967) *Professor Emeritus of English*
B.A., Wake Forest; M.S., Columbia; Ph.D., George Peabody
- George J. Griffin (1948–1981) *Professor Emeritus of Religion*
B.A., Wake Forest; Th.B., Southern Baptist Seminary; B.D., Yale; Ph.D., Edinburgh
- Ralph Cyrus Heath (1954–1969) *Professor Emeritus of Marketing*
B.A., Princeton; M.B.A., D.B.A., Indiana
- Owen F. Herring (1946–1963) *Professor Emeritus of Religion*
B.A., M.A., Wake Forest; Th.M., Th.D., Southeastern Baptist Seminary; D.D., Georgetown
- Lois Johnson (1942–1962) *Dean of Women Emerita*
B.A., Meredith; M.A., North Carolina (Chapel Hill)
- Harry L. King Jr. (1960–1981) *Professor Emeritus of Romance Languages*
B.A., Richmond; M.A., Ph.D., North Carolina (Chapel Hill)
- Robert E. Lee (1946–1977) *Professor Emeritus of Law and Dean Emeritus of the School of Law*
B.S., LL.B., Wake Forest; M.A., Columbia; LL.M., S.J.D., Duke
- Jasper L. Memory Jr. (1929–1971) *Professor Emeritus of Education*
B.A., Wake Forest; M.A., Columbia

* Died March 18, 1982

** Died January 1, 1982

- Harold Dawes Parcell (1935–1970) *Professor Emeritus of Romance Languages*
B.A., North Carolina (Chapel Hill); A.M., Ph.D., Harvard
- Clarence H. Patrick (1946–1978) *Professor Emeritus of Sociology*
B.A., Wake Forest; B.D., Andover Newton; Ph.D., Duke
- Grady S. Patterson (1924–1972) *Registrar Emeritus*
B.A., Wake Forest
- Beulah L. Raynor (1946–1979) *Associate Professor Emerita of English*
B.A., East Carolina; M.A., Wake Forest
- Albert C. Reid (1917–18; 1920–1965) *Professor Emeritus of Philosophy*
B.A., M.A., Wake Forest; Ph.D., Cornell
- Paul S. Robinson (1952–1977) *Professor Emeritus of Music*
B.A., Westminster; B.M., Curtis; M.S.M., D.S.M., Union Seminary
- Harold Wayland Tribble (1950–1967) *President Emeritus*
B.A., Richmond; Th.M., Th.D., Southern Baptist Seminary; M.A., Louisville; Ph.D., Edinburgh; D.D. Stetson; LL.D., Union, Wake Forest, Richmond, Duke, North Carolina (Chapel Hill)
- Carroll W. Weathers (1950–1972) *Professor Emeritus of Law and Dean Emeritus of the School of Law*
B.A., LL.B., Wake Forest
- David Welker (1969–1980) *Professor Emeritus of Theatre Arts*
B.A., M.A., Illinois; Ph.D., Minnesota
- Carlton P. West (1928–1975) *Librarian Emeritus*
B.A., Boston; M.A., Yale; B.A. in L.S., North Carolina (Chapel Hill)



Provost and Professor of English Edwin G. Wilson talk with students.

The Committees of the Faculty

September 1, 1982

The terms of members, except where otherwise shown, expire on August 31 of the year indicated. Each committee selects its own chairman except where the chairman is designated. All members of a committee vote except as otherwise indicated.

EXECUTIVE COMMITTEES

The Committee on Academic Affairs

Non-voting. Dean of Men, Dean of Women, Associate Dean, Assistant Dean, and one student in the College. *Voting.* Dean of the College; 1985 David A. Hills, Peter D. Weigl; 1984 John R. Earle, W. Graham May; 1983 Shasta M. Bryant, John H. Litcher, and one student in the College.

The Committee on Admissions

Non-voting. Director of Admissions and Financial Aid, Associate Dean of the College, Dean of Women, and one student in the College. *Voting.* Dean of the College; 1985 Richard D. Carmichael, Timothy F. Sellner; 1984 Carl V. Harris, J. Edwin Hendricks; 1983 Nancy J. Cotton, Charles L. Richman, and one student in the College.

The Committee on Scholarships and Student Aid

Non-voting. One student in the College. *Voting.* Dean of the College, Director of Admissions and Financial Aid, Dean of Women, Associate Dean; 1985 Alonzo W. Kenion, Willie Pearson Jr.; 1984 Andrew V. Ettin, Willie L. Hinze; 1983 Deborah L. Best, Jon M. Reinhardt, and one student in the College.

The Committee on Curriculum

Provost, Dean of the College, Registrar, and the chairman of each department of the College as follows: *Division I.* Art, Classical Languages, English, German, Music, Romance Languages, Speech Communication and Theatre Arts. *Division II.* Biology, Chemistry, Mathematics, Physical Education, Physics. *Division III.* Education, History, Military Science, Philosophy, Religion; *Division IV.* Anthropology, Business and Accountancy, Economics, Politics, Psychology, Sociology.

ADVISORY COMMITTEES

The Committee on Academic Planning

Non-voting. Provost and one student in the College. *Voting.* Dean of the College, Director of Libraries; 1986 Robert Knott, Roger A. Hegstrom; 1985 Fred L. Horton

Jr., Richard D. Sears; 1984 Ellen E. Kirkman, David B. Levy; 1983 James P. Barefield, John C. Moorhouse, and one student in the College.

The Committee on Athletics

Non-voting. Director of Athletics. *Voting.* Vice President and Treasurer, Dean of the College, faculty representative to the Atlantic Coast Conference; 1987 Robert W. Brehme, Joseph O. Milner; 1986 Thomas F. Gossett, Ralph C. Wood Jr.; 1985 Donald E. Frey, Donald O. Schoonmaker; 1984 Marcus B. Hester, J. Don Reeves; 1983 Ivey C. Gentry, Jeanne Owen.

The Committee on Institutional Planning

Non-voting. Provost, Vice President and Treasurer, and one student in the College. *Voting.* Dean of the College; 1986 Kathleen M. Glenn, Elmer K. Hayashi; 1985 Robert C. Beck, Charles M. Lewis; 1984 James C. McDonald, William M. Moss; 1983 James G. McDowell, J. Van Wagstaff, and one student in the College.

The Committee on Nominations

Voting. 1985 Elizabeth Phillips, Howard W. Shields; 1984 Wilmer D. Sanders, Anne S. Tillett; 1983 John L. Andronica, Ronald E. Nofle.

The Committee on Library Planning

Non-voting. Provost, Dean of the Graduate School, one faculty representative from the Committee on Academic Planning, and one student in the College. *Voting.* One faculty member from each department in the College, Dean of the College, Director of Libraries, and one student in the College.

SPECIAL COMMITTEES

The Committee on Publications

Dean of the College, Vice President and Treasurer, Director of Communications, the three faculty advisers of *Old Gold and Black*, *The Student*, and *The Howler*; 1985 To be appointed; 1984 Richard L. Shoemaker; 1983 W. Buck Yearns Jr.

The Committee for Teacher Education

Dean of the College, Dean of the Graduate School, Chairman of the Department of Education; 1985 To be appointed; 1984 John E. Collins, Gregorio C. Martín; 1983 John V. Baxley, Richard D. Sears.

The Committee for the ROTC

Dean of the College; the ROTC Coordinator, the Professor of Military Science; 1985 To be appointed; 1984 Philippe R. Falkenberg; 1983 Thomas C. Taylor.

The Committee on Honors

Non-voting. One student in the College. *Voting.* Dean of the College, the Coordinator of the Honors Program; 1986 David S. Weaver; 1985 John A. Carter Jr.; 1984 Howell Smith; 1983 James Kuzmanovich, and one student in the College.

The Committee of Lower Division Advisers (1982-83)

Dean of the College; Chairman of the Lower Division Advisers (Larry E. West, James P. Barefield, David B. Broyles, Richard D. Carmichael, John E. Collins, Gary A. Cook, Nancy J. Cotton, Cyclone Covey, Leo Ellison Jr., Herman E. Eure, Philip R. Falkenberg, Charles V. Ganelin, Louis Goldstein, Paul M. Gross, Carl V. Harris, Catherine T. Harris, Elmer K. Hayashi, N. Rick Heatley, Marcus B. Hester, David L. Hills, Fred L. Horton Jr., Susan Jackels, Paul H. D. Kaplan, Ralph C. Kennedy II, Ellen E. Kirkman, Lula M. Leake, David B. Levy, Charles M. Lewis, John H. Litch, George E. Matthews Jr., W. Graham May, James G. McDowell, Robert D. Miller, Ronald E. Nofle, A. Thomas Olive, Willie Pearson Jr., Gregory D. Pritchard, Marianne A. Schubert, Ben M. Seelbinder, Timothy F. Sellner, Cecelia H. Solano, Robert L. Sullivan, Robert W. Ulery Jr., Marcellus E. Waddill, David S. Weaver, Peter D. Weigl, Raymond L. Wyatt. *Director of Peer Advisers Program:* David W. Catron.

The Committee on Orientation

Dean of the College, Chairman of the Lower Division Advisers, Dean of Men, Dean of Women, President of the Student Government or his or her representative, and other persons from the administration and student body invited by the chairman.

The Committee on Records and Information

Non-voting. The Registrar. *Voting.* Dean of the College, Archivist, Vice President of the Faculty, Secretary of the Faculty, 1985 To be appointed; 1984 Robert H. Duford; 1983 Raymond L. Wyatt.

The Committee on Open Curriculum

Dean of the College; 1986 Herman E. Eure, Michael L. Sinclair; 1985 Jeanne Ower, Larry E. West; 1984 Fred L. Horton Jr., Fredric T. Howard; 1983 John L. Andronice, J. Ned Woodall.

JOINT FACULTY/ADMINISTRATION COMMITTEES

The Joint Admissions Committee

Dean of the College, Director of Admissions and Financial Aid, Provost, Nancy J. Cotton, John W. Nowell, Charles H. Talbert.

The Judicial Council

Administration. Toby A. Hale, Patricia A. Johansson. *Faculty.* George P. Williams; Fred L. Horton Jr., Jeanne Owen, Blanche C. Speer; two students in the College. *Faculty Alternates.* To be appointed, Carlton T. Mitchell. *Administrative Alternate.* To be appointed; and one student alternate.

The Committee on Student Life

Dean of the College or his designate, Dean of Women, Dean of Men; 1985 To be appointed; 1984 Michael D. Hazen; 1983 Brian M. Austin, and three students in the College.

OTHER FACULTY ASSIGNMENTS

Faculty Advisers to the Honor Council

1985 To be appointed; 1984 Philippe R. Falkenberg, 1983 Nancy J. Cotton.

Faculty Advisers to Student Judicial Board

1985 To be appointed; 1984 Catherine T. Harris, 1983 David B. Broyles.

Faculty Marshals

Carlton T. Mitchell, John E. Parker Jr., Mary Frances Robinson

University Senate

President, Provost, Vice-President for Health Affairs, Vice-President and Treasurer, Dean of the College, Dean of the School of Business and Accountancy, Dean of the Graduate School, Dean of the School of Law; Dean of the Babcock Graduate School of Management; Dean of the Bowman Gray School of Medicine, Director of Libraries, and the following:

Representatives of the College: 1986 Carlton T. Mitchell, Mary Frances Robinson; 1985 Jack D. Fleer, Donald H. Wolfe; 1984 Ralph S. Fraser, Robert M. Helm; 1983 Bynum G. Shaw, Charles H. Talbert.

Representatives of the School of Business and Accountancy: 1985 Arun P. Dewasthali; 1983 Stephen Ewing.

Representatives of the Graduate School: 1986 Lawrence R. DeChatelet; 1985 Ronald V. Dimock; 1984 Percival Perry; 1983 Howard W. Shields.

Representatives of the School of Law: 1985 Richard G. Bell; 1983 Joel S. Newman.

Representatives of the Babcock Graduate School of Management: 1985 James M. Clapper; 1983 Thomas A. GoHo.

Representatives of the Bowman Gray School of Medicine: 1986 B. Mosely White; 1985 Robert W. Prichard; 1984 Timothy C. Pennell; 1983 C. Douglas Maynard.

OTHER COMMITTEES

Equal Opportunity Advisory Committee

Albert Anderson, Kim Berry, Ronald Boston, Edgar D. Christman, Thomas B. Clarkson, Robert A. Diseker, James L. Ferrell, Ross A. Griffith, G. Gene Hooks, Jean B. Hopson, Norman N. Klase, Thomas E. Mullen, Willie Pearson Jr., Charles L. Richman, Charles P. Rose Jr., Marianne A. Schubert, Sally Schumacher, Margaret S. Smith, Nat E. Smith, Thomas C. Taylor.

University Grievance Committee

College. 1986 Robert W. Lovett, Leo Ellison Jr. (alternate), *Graduate School.* 1984 Richard W. St. Clair, David W. Catron (alternate), *School of Law.* 1985 Charles P. Rose Jr., James E. Bond (alternate), *Babcock Graduate School of Management.* 1983 Melvin J. Steckler, Robert N. White (alternate), *Bowman Gray School of Medicine.*



Thomas E. Mullen, Dean of the College

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